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NEWS SUMMARY

GENERAL

Bokassa waits as troops move in

Paramilitary gendarmes arrived at the French air base where deposed Central African Emperor Jean Bedel Bokassa was confined aboard a parked airliner, raising speculation that an attempt might be made to remove him by force.

As French authorities tried to persuade another country to grant him refuge, Mr. Bokassa stayed aboard his personal Caravelle aircraft which landed at Evreux, 60 miles from Paris, on Friday. With him were his personal aide and a three-man crew.

His entourage were allowed to spend the night in billets on the base and French officials said they were free to be repatriated to the restored Central African Republic today. But the deposed President was declared in France to be "undesirable." **Page 4**

Callaghan wins few backers

Efforts by moderate union leaders Bill Sirs and Terry Duffy to mount a campaign of support for Labour leader James Callaghan against Left-wing attacks are gaining little backing among other union moderates.

Many believe that Mr. Callaghan has overplayed his hand and others are determined to keep out of Labour Party squabbles. **Back Page**

Nuclear row

Cracks found in vital reactor parts are threatening to delay France's nuclear power programme. The country's two leading trade unions urged the Government not to commission three new plants until the faults can be checked. **Page 2**

Poser for ITV

Independent television executives may attempt to transmit new autumn programmes if the six-week-old strike which blacked out ITV screens is settled soon. Programme will decide this week whether to mount a makeshift schedule. **Page 4**

Basque killing

The military governor of the province of Guipuzcoa, General Lorenzo González-Valles Sanchez, was shot dead in San Sebastian, the latest victim of extremist guerrillas. He was the fifth high-ranking Spanish officer murdered in four days. Page 2

Tarakki 'alive'

Former Afghanistan President Noor Mohammad Tarakki, who had been reported killed in a gun battle ten days ago, was alive but too sick to serve as head of state, said the country's new leader, Mr. Hafizullah Amin. Asked what was wrong with Mr. Tarakki, he said: "I am not a doctor."

Hope for rhinos

China has agreed to abide by the convention on international trade in endangered species, a decision that may save East Africa's rhinoceros herds from extinction. China takes more than half the world's supply of rhinoceros horn, an ingredient in medicines and aphrodisiacs.

Briefly . . .

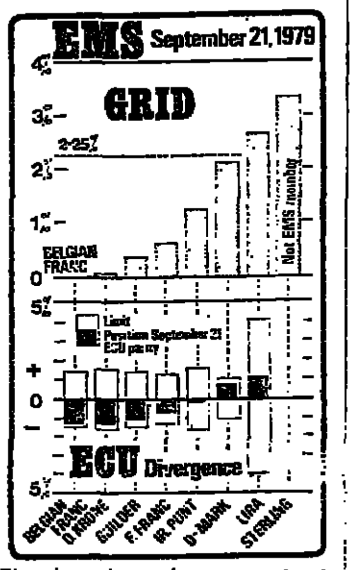
Detectives from Scotland Yard's art and antiques squad are hunting three thieves who stole gold statuette worth £500,000 from London saleroom.

Guerrillas loyal to ousted Premier Pol Pot claimed to have killed six Soviet military advisers in Kampuchea.

BUSINESS

D-mark may overtake lira

● **FOREIGN** exchange trading was dominated by the weakness of the dollar last week. The *D-mark remained the second* strongest currency in the European Monetary System and threatens to overtake the Italian lira as the top currency. Since the D-mark has a much smaller allowed margin of movement than the lira this continues to create strains within the system. The authorities in France and Holland have few problems at present, although Paris interest rates remained firm and an outside possibility of a rise in the Dutch discount rate in the near future was mentioned. The Danish krone was helped by the rise in Denmark's discount rate to 11 per cent at the beginning of the week, leaving the Belgian franc the weakest member of the EMS once again. The fall of sterling left the Irish punt close to parity with *its British* counterpart.



The chart shows the two constraints on exchange rates within the European Monetary System; the "grid" of cross rates from which no currency (except the lira) may move more than 2¼ per cent; and the varying degrees by which each currency may diverge from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies. The "grid" is always shown by reference to the weakest currency in the system, which is the base line in the top chart.

● **ACTION** by U.S. Congress could cut drastically World Bank operations, say Bank officials. The issue is likely to come to a head in October when the Senate is due to act on the 1980 U.S. Foreign Aid Bill. **Back Page**

● **CBI** director general Sir John Methven returns from holiday today to a storm over the CBI's handling of British industry opposition to the UK/U.S. double tax treaty. **Back Page**

● **BL** is to press Japanese car *makers to give an unqualified* assurance that they will restrict their share of the UK market to 10 per cent in 1980. The tough approach will be taken by Mr. Pratt Thompson, chairman of BL International. **Page 4**

● **THE** British and Norwegian Governments are expected to go ahead with separate gas collection pipeline schemes for the North Sea, costing several billion pounds. **Back page**

● **PAN AMERICAN** Airways' purchase of 12 Lockheed Tristars with Rolls-Royce RB-211 engines has progressed with the completion of half of the controversial £520m package. **Back page; Feature, Page 14**

● **BUILDING** societies have so far failed to agree on the best way to establish a deposit protection fund for their investors. Work began on devising a fund after the failure of the Grays Building Society. **Page 4**

COMPANIES

● **BEREC GROUP,** Europe's largest manufacturer of dry batteries, has confirmed details of the proposed public tender offer for the outstanding 39.8 per cent stake in its Italian subsidiary Superpila. **Page 17**

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For latest Share Index 'phone 01-246 8026

Overseas banks increase lending to UK industry

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

U.S. banks based in London now account for more than a fifth of all lending to manufacturing industry in the UK, according to official figures published this morning.

The Bank of England's quarterly analysis of bank lending to UK residents confirms the sharp rise in advances to most sectors of the economy between May and August. It highlights the major part played by foreign banks.

Lending by U.S. banks to manufacturing industry is now nearly half that of the London clearing banks. In mid-August the figures were £2.9bn and £6.13bn respectively. Foreign banks as a whole accounted for 31 per cent of all lending to manufacturing. This is slightly more than a year ago, and compares with 28 per cent three years ago.

The figures highlight the big increase in the impact of foreign—and especially U.S. and Japanese—banks on domestic banking in the last decade. More than 250 foreign banks are directly represented in London. About 60 of them are from the U.S.

Most have only one office, and even the biggest have only a handful of outlets. In contrast, the London clearers have more than 8,500 branches.

Because of their relatively small number of retail outlets, the overseas banks have concentrated on aggressive lending to industry and services rather than to individuals. They have won a large share of the market.

The clearers have continued to dominate the market in lending to private individuals and to sectors such as agriculture and construction. At the same time, the clearers' deposit base has been under pressure as a result of competition from building societies.

The foreign banks' share of total lending to UK residents—in both sterling and foreign currencies—is, at about 27 per cent. less than their proportion of manufacturing and service business.

The Japanese banks have been particularly active in lending to non-retail distribution. They made 23.5 per cent of total advances to this sector in mid-August. This is partly associated with financing importers and distributors of Japanese goods in the UK.

Total sterling advances and acceptances (commercial bills) to UK residents rose by £3.47bn in the three months to mid-August—an increase of 9.1 per cent. This compares with a rise of £1.94bn in the previous three months.

But seasonal factors inflated lending to the private sector (the bulk of the total) by some £260m between May and August, whereas these influences depressed lending by roughly £500m in the previous three months.

The increase in lending was widespread between May and August, reflecting the impact both of the consumer boom and the upturn in industrial activity from the depressed winter conditions.

In the last week or so, some leading City analysts have been talking about possible signs of an easing in the demand for credit, particularly by the personal sector.

The evidence so far is tentative. Several banks believe that industry's borrowing will continue to grow strongly at least until the New Year, partly because of an involuntarily rise in stock levels. The personal demand for credit will depend on the response to the autumn tax rebates and on pre-Christmas spending.

In the May to August period, lending to manufacturing rose by 8.5 per cent. Advances to hire purchase finance houses jumped by 15.5 per cent, and lending to individuals rose by 10.3 per cent, both no doubt associated with the pre-Budget consumer boom.

In the 12 months to mid-August, total sterling lending to UK residents rose by 26 per cent.

Bank advances table Page 16

CBI warns Government on union law change

BY CHRISTIAN TYLER, LABOUR EDITOR

THE CBI has warned the Government not to change the law so that companies can sue trade unions which prevent them from delivering goods or taking delivery of supplies.

This proposal, presented to unions and employers as an "option" by Mr. James Prior, Employment Secretary, is strongly supported by senior Conservative lawyers.

The CBI's unease suggests that this option could be dropped from the Government's agenda. It follows similar representations by the Engineering Employers Federation. The TUC has protested that the proposals represent a threat to the right to strike.

The Confederation's latest views, published today, are designed to influence the Bill for trade union reform that Mr. Prior plans to publish about November.

At present trade unions who take industrial action which results in firms being in breach of commercial contracts cannot be sued in tort for damages. The Government would like to change that to clamp down on blacking, boycotting or other "secondary" action.

A survey of CBI members shows that a more limited proposal, for curbing secondary picketing, is widely supported, but wider changes might be necessary in the future. The CBI does suggest, however, that employers should be able to take out injunctions against "the act of picketing" rather than individual pickets. This, it says, would stop unions rotating the pickets to avoid prosecution.

On parallel proposals for giving workers wider statutory freedoms from the closed shop, the CBI says some employers believe those could lead to industrial relations problems. But it has decided that "certain limited action must be aken."

It also notes that employers are divided on whether the proposed closed shop "conscience clause" should allow workers to object to being a member of a particular union or of any union at all. A majority preferred the first option—wider than the second—but an important minority, including engineering companies, felt that it also could lead to disputes.

Plans to subsidise union balots on strikes and for election of union leaders are generally welcomed by the CBI, but it has reservations about how effective it would be in practice.

The most controversial of the Government's proposals, however, is the one limiting trade unions' immunity for breach of commercial contract.

Mr. Prior intended to reintroduce the state of the law between 1974 and 1976, when a Conservative Opposition amendment to the Trade Union and Labour Relations Act narrowed the immunity to contracts of employment only.

The CBI, in its submission to Mr. Prior, says: "The CBI is conscious of the extraordinary complexity of the whole area of trade union immunities from legal action and both the Department of Employment and the CBI are now examining it in depth.

"We are therefore convinced that at this stage legislative change should deal solely with the subject of secondary picketing in a way which can be simply understood by employers so they can enforce their rights at law, and also by the public at large."

Sir John Methven, CBI director general, says in a letter to Mr. Prior that the overwhelming view of the members was that changes were needed "to redress the present imbalance in industrial relations and that urgent action is needed in some cases."

Methven returns to row. Back Page.

Chinese minister in Moscow

BY DAVID SATTER IN MOSCOW

MR. WANG YOUPING, China's Deputy Foreign Minister, arrived here yesterday for the first detailed talks on Sino-Soviet problems for 14 years. The Chinese delegation would "do its utmost" to bring about a genuine improvement in relations, he declared.

Mr. Wang, the former Chinese ambassador to the Soviet Union, was greeted by his Soviet counterpart, Mr. Leonid Ilyichev, who will lead the Russian delegation. The meetings are expected to begin early this week.

The talks—the first in 14 years—were proposed by the Chinese last spring and constitute the most important effort to improve relations betwen the Soviet Union and China since they began to deteriorate 20 years ago.

The Chinese and the Soviets have both expressed interest in seeing relations improve, at least on a State-to-State level. But neither side is expressing much optimism. Diplomatic sources said that the full agenda has not yet been decided.

Mr. Konstantin Chernyenko, a member of the ruling Politburo, promised in a speech last month in Frunze, near the Chinese border, that the Soviet Union was ready to build relations on the basis of peaceful co-existence but remained opposed to the Chinese policy of heightening tension and the theory and practice of Maoism.

Chinese officials in Moscow, for their part, said last night that they did not expect anything to come out of the talks for some time.

Peking's call for talks to improve relations followed its abrogation of the 30-year Sino-Soviet friendship treaty and the conclusion of its border war with Vietnam. China did not insist, as it had done in the past, that Soviet troops pull back from the Chinese border with Russia and Mongolia as a precondition for the talks. This made it possible for the talks to take place.

The four-man Chinese delegation to the Sino-Soviet talks was originally scheduled to arrive in Moscow last Sunday but the departure from Peking was postponed when a technical problem forced cancellation of the once-a-week Chinese airline flight.

The talkes will occur against the background of the continuing Sino-Soviet rivalry and a recent setback for the Soviet Union in the United Nations where the Pol Pot regime, which was deposed by Vietnamese-backed Cambodian rebels, was recognised as the legitimate Government of Cambodia.

The Soviet Union has given its full backing to the new Cambodian Government. Tass, the offical news agency, delayed *reporting the UN vote for 14* hours and then accused the U.S. and China of using manipulation and tricks to bring it about.

AP adds: Although neither expects the ideological issues which divide the two to be resolved, each side hopes for progress in the expansion of trade, the exchange of scientific and cultural missions and, at the maximum, an agreement to *lower the threshold of hostility* which has prevailed between them since 1956.

Given the history of bad feeling and intemperate language since then, the hopes are muted. The doubts have been expressed by leaders in Peking and Moscow who question each other's sincerity.

Finance Ministers discuss parities

By Giles Merritt in Brussels

EEC FINANCE Ministers and Central Bank governors were last night holding unscheduled talks in Brussels on a possible re-alignment of parities within the European *Monetary System* (EMS). Britain was not represented at the meeting because sterling is not part of the system.

The EMS started last March. The negotiations are aimed at easing the increasingly serious strain on it caused by the rising value of the Deutschmark and waning confidence on foreign exchange markets in the Belgian franc and the Danish krone.

West Germany is understood to be coming under heavy pressure from the other seven EEC countries involved to revalue the D-Mark against the ECU (the European Currency Unit), against which parity values are calculated. This would ease pressure on the two weakest EMS currencies.

Mr. Anker Joergensen, the Danish Prime Minister, said West Germany had asked for the meeting.

Speculative

The hurriedly-called meeting follows a week of uncertainty on the foreign exchange markets. The U.S. dollar slid under heavy selling so that the dollar-D-Mark rate fell to DM1.7645 on Friday evening.

Speculative selling of the Belgian franc and the Danish krone has forced both currencies very close to the lower end of the 2.25 per cent fluctuation band permitted against their ECU parity rate.

The rising value of the D-Mark is accentuating their decline. Both currencies last week came close to dropping past the divergence indicator that is the alarm bell of EMS.

There has been heavy interventions over the last few days by the central banks of the main EEC countries in order to minimise divergences. In recent months this has been combined with a series of interest rate increases by countries with weaker currencies.

RHODESIAN FRONT WARNING

White MPs reject any 'sell-out'

BY BRIDGET BLOOM IN LONDON AND TONY HAWKINS IN SALISBURY

RHODESIAN FRONT MPs have given a warning that they would *not be a party to any* "sell-out" of Rhodesia's 250,000 white minority.

The warning comes as the Lancaster House talks move into their third week this morning in an endeavour to conclude an all-party agreement on a new constitution.

The white parliamentary caucus of the Rhodesian Front yesterday cabled Mr. Ian Smith, the former Prime Minister, expressing their "continued support" for his leadership. "We stand by the 1979 constitution and all the safeguards contained therein," the MPs said. They would not be party to a "sell-out" of the white or any other minority community.

Mr. Ian Smith: Caucus supports his leadership

Last Friday, Mr. Smith was the sole dissenting voice as Bishop Muzorewa announced his delegation's acceptance in principle of Britain's constitutional proposals. These allow for whites 20 per cent of the seats in Parliament, but abolish their parliamentary and political vetos entrenched in the 1979 internal settlement constitution.

This tough stand by the Rhodesian Front caucus is presumably designed to strengthen Mr. Smith's hand within Bishop Muzorewa's delegation as well as to stiffen the resistance of the whole team as it gets down this week to negotiate the details of a new Zimbabwe constitution.

However, observers in London and Salisbury do not appear to consider the Rhodesian Front move as a threat to the conference. They point out that three of the four white Rhodesian Front ministers now in London voted on Friday for acceptance of Britain's proposals.

In addition, in purely parliamentary terms, it is pointed out that only six of the 28 white MPs in the present Rhodesian parliament would need to vote with 72 black members in order to enact a new constitution.

Mr. Smith hinted over the weekend that his dissent last Friday was tactical. His delegation, he said, should have "continued to struggle for a compromise." By accepting the British principles, Salisbury had weakened its negotiating position: "Obviously the British are in a strong position now that they can say 'You have accepted it in principle, so we stand on these points.' We are going to find it very difficult to negotiate for the removal of sanctions."

The Rhodesia Front cable may reflect the belief by many whites that the Muzorewa delegation has gone far enough in making concessions at the talks. Any further concessions aimed at winning Patriotic Front support for transitional arrangements could be strongly opposed by many white MPs. But discussion of the tranisitional arrangements will take place only when there is broad agreement on a constitution, and this week, as one conference official put it, the ball is in the court of the Patriotic Front.

Front leaders Mr. Joshua Nkomo and Mr. Robert Mugabe are due to continue discussions on a new constitution this morning under the chairmanship of Sir Ian Gilmour, the Lord Privy Seal, in the absence of Lord Carrington at the UN.

The Foreign Secretary feels that sufficient progress has been made to enable him to make his long-planned journey to the UN General Assembly, but he may find that his diplomatic skills are again very necessary when he returns to take charge on Wednesday or Thursday.

In particular a great deal of ingenuity may be needed to work out a formula which can overcome the Patriotic Front's deeply felt opposition to granting whites special representation in Parliament.

Editorial comment, Page 14

COMPANY NOTICES

ANGLOVAAL GROUP

GROUP COMPANIES CLOSING OF TRANSFER BOOKS AND REGISTERS OF MEMBERS

NOTICE IS HEREBY GIVEN that the transfer books and registers of members of the following companies (all of which are incorporated in the Republic of South Africa) will be closed for the periods stated for the purpose of determining those persons entitled to attend the annual general meetings of members thereof.

Name of Company	Date of Closing Transfer Books and Registers of Members 1979
HARTEBEESTFONTEIN GOLD MINING COMPANY LIMITED	16 to 22 October
ZANDPAN GOLD MINING COMPANY LIMITED	11 to 17 October
EASTERN TRANSVAAL CONSOLIDATED MINES LIMITED	11 to 17 October
MIDDLE WITWATERSRAND (WESTERN AREAS) LIMITED	18 to 24 October
ANGLO-TRANSVAAL CONSOLIDATED INVESTMENT COMPANY LIMITED	17 to 23 November

By Order of the Boards.
ANGLO-TRANSVAAL TRUSTEES LIMITED.
London Secretaries.
per: I. S. FARMER.

London Secretaries,
295, Regent Street,
London W1R 8ST.
19 September, 1979.

Sadat attacks Saudi 'plots' against Egypt and Sudan

BY ROGER MATTHEWS IN CAIRO

PRESIDENT Anwar Sadat of Egypt has accused Saudi Arabia of plotting against the Government of Sudan and against his own country. The attack is thought to reflect fears in Cairo that Sudan is being urged to break relations with Egypt in return for vital economic assistance.

The Government of President Jafaar Nimairi and those of Somalia and Oman, are the only ones not to have joined the Arab boycott of Egypt following Mr. Sadat's signing of the peace treaty with Israel. Mr. Hosni Mubarak, Egypt's Vice-President paid a three-hour visit to Khartoum on Saturday to deliver a message from Mr. Sadat.

In an interview with the Magazine October, Mr. Sadat claimed that Saudi Arabia was hatching its plot against Sudan and Egypt in co-operation with Libya. The original conspiracy, according to Mr. Sadat, had been set up by Crown Prince Fahd of Saudi Arabia and President Saddam Hussein of Iraq.

Mr. Sadat said that the axis between Crown Prince Fahd and President Saddam Hussein had been brought about by "hysteria and money."

The Egyptian leader also attacked the Governments of Syria and Iran. He said the Iranian religious leader Ayatollah Khomeini had brought "killing, malice and bitterness" to his country, and was provoking trouble in other countries. President Assad of Syria was inflicting "brutal disruption" on his country through police terrorism and the execution of opponents.

Egyptian newspapers yesterday quoted an official as denying reports that Egypt had received replacement engines from the Soviet Union for its MiG-21 fighters and helicopters. The official claimed that the purpose of the reports was to influence discussions in the U.S. Congress on arms supplies for Egypt. It was also stressed that when Saudi Arabia refused to finance the purchase of 50 F-5E fighters from the U.S., the Chinese had stepped in immediately and sold Egypt 50 of their own aircaft.

James Buchan reports from Jeddah: Saudi Arabia has blocked an effort to extend the Arab boycott of Egypt, according to a report in the Mecca newspaper, Al-Nadwa.

A proposal to cut postal, shipping and air services to Egypt was presented with Syrian and Libyan support to a closed session of the Arab League Council in Tunis last week. The Saudi delegate is reported to have said that the proposal could only harm the people of Egypt, whereas the object should be "to protect them from the failings of the Egyptian regime."

Reuter reports from Cairo: The United States is to provide Egypt with extra development aid totalling nearly $70m (£32.5m), bringing to an estimated $1bn the amount of American assistance to that country this year. Mr. Douglas Bennet, chief administrator of the U.S. Agency for International Development, said help for Egypt was now the Agency's biggest single programme.

Franz Josef Strauss

Strauss and Bahr may go to law

BY ROGER BOYES IN BONN

A SENIOR member of the West German Social Democratic Party has threatened to take legal action against Herr Franz Josef Strauss, the opposition candidate for Chancellor in next year's elections.

The threat by Herr Egon Bahr, the Social Democrats' party manager, is the latest indication of the bitterness which is creeping into the unofficial election campaign. The row follows a series of rallies held by Herr Strauss, the leader of the Bavarian-based Christian Social Union, in the Ruhr last week. Herr Strauss was shouted down by thousands of demonstrators and was pelted with eggs and tomatoes.

On Thursday, the Bavarian leader accused Herr Bahr, a close aide of Herr Willy Brandt, the Social Democrats' chairman, of initiating disturbances in Essen and Cologne. Herr Bahr replied that he would take legal action against Herr Strauss unless the allegations were withdrawn before midday on Saturday.

Herr Strauss, through his lawyer, has merely pressed home his charges, saying that the Ruhr disturbances had been encouraged and approved by Herr Bahr and that the matter had been discussed by the Social-Democrat leadership. Herr Strauss claims that if it comes to a trial he will call Chancellor Helmut Schmidt, Herr Brandr and other Social Democrat politicians as witnesses.

Herr Strauss's chances in the 1980 elections will depend on his ability to broaden his support to regions outside Bavaria and the South and the demonstrations in the Ruhr thus came as an unpleasant surprise to the opposition.

Friedrich Krupp, the West German engineering, steel and shipbuilding group, has named Dr. Wilhelm Scheider, a steel specialist, as future chairman of its executive board.

No date has been released for the formal succession but Krupp executives indicated that it could be a number of years before Dr. Scheider takes over

Cracks in reactor may delay French nuclear programme

BY TERRY DODSWORTH IN PARIS

THE FRENCH electricity generating board (EDF) has conceded the truth of trade union allegations that cracks were found several months ago during construction of a pressurised water reactor under licence from the U.S. group, Westinghouse.

The row over the cracks in vital parts of the reactor, which threatens the next step in the development of France's nuclear power programme, coincides with the closure of a part of one of the industry's working plants at Bugey in eastern France because of a radioactive leak. Although the EDF said that this accident, caused by a faulty valve, is not serious, the plant will have to be closed down for several days.

The unions and the EDF differ sharply over the dangers posed by the cracks, which are up to 6mm deep.

Union leaders say that they have now revealed the defects, first noted by an employee at the Framatome works of the Creusot - Loire engineering group, because of the workers' anxieties in the face of the authorities' silence on the issue.

In an official response to the accusations, however, the EDF has dismissed the defects as "superficial." While admitting that its engineers have noted the cracks, it says they would present "no problems in the working of the power stations."

On the question of stations already in service, it added that no defects had so far been found. Normal safety checks were continuing, and these would be helped by a special new inspection machine.

France's two leading trade unions, the Left-wing CFDT and the Communist CGT, have written to the Government to ask for a delay in the commissioning of three new plants until these faults can be checked.

There are indications that the EDF has already taken note of these objections by delaying the start-up of these three plants, at Tricastin, Gravelines and Dampierre.

Rotterdam dockers strike ends

By Our Amsterdam Correspondent

LEADERS OF the unofficial dockworkers' strike, which has paralysed much of the port of Rotterdam for four weeks, have ordered the 6,000 strikers to resume work today.

About 800 men defied the pickets and resumed work on Saturday. The strike was over a pay claim in excess of an agreement which the unions had negotiated and hit mainly the general cargo sector of the port.

The Rotterdam employers' organisation has refused throughout to meet the strikers' demands and the main transport union declined to declare the strike official.

The collapse of the strike was hastened when the union promised to pay members Fl 550 (£122) each as an advance on a new labour agreement.

A strike by Rotterdam tug operators, who have been supported by the dockers, is to continue.

French seek refuge for ex-Emperor

BY OUR PARIS CORRESPONDENT

FRENCH diplomats were last night seeking a host country willing to give refuge to the former Emperor Bokassa, deposed ruler of the restored Central African Republic, who fled to France at the weekend.

The French have made it clear that they do not want Bokassa in France, despite the fact that he has dual French and Central African nationality. the Emperor's successor is also causing the French Foreign Office some embarrassment.

The new President David Dacko, speaking in Bangui, the capital, has said that the coup against Bokassa was planned with France and friendly African countries over the past two months. Some such plan had been widely suspected in France because of the speed with which a French army detachment of two companies arrived in Bangui after the coup. French officials have declined comment on Mr Dacko's claim.

The French insist that their troops will be withdrawn as soon as security is assured in the republic.

Bokassa's arrival in France came after he had been asked to leave Libya where he was negotiating an aid deal at the time of the coup. The former Emperor owns several houses in France and professes a great sentimental attachment to the country.

Since then, negotiations have continued, with the former Emperor isolated aboard his Caravelle with only one aide and the aircrew. He has not been allowed to step on to French soil.

Basque guerrillas kill military governor

BY DAVID GARDNER IN MADRID

A MILITARY governor of the Basque province of Guipuzcoa, Brigadier General Lorenzo Gonzalez-Valles Sanchez, was shot dead yesterday in San Sebastian, the third high-ranking army officer to be murdered in the past four days, and the twelfth this year.

The shooting took place only hours after the major Basque parties began the run-up to next month's referendum on the statute of autonomy for the region, agreed last July between the Government and the main Basque Nationalist grouping, the Christian Democratic Partido Nacionalista Vasco (PNV).

General Gonzalez-Valles was killed by a single shot while strolling with his wife along San Sebastian's main promenade. The assassination is believed to be the work of the radical nationalist guerrilla organisation, ETA-militar, which has claimed responsibility for last Wednesday's machine-gun attack in central Bilbao, in which a colonel and a major died.

The killings have been vehemently condemned by the PNV, which on Saturday opened its campaign in favour of the Statute of Autonomy with an unprecedented attack on Herri Batasuna (Popular Unity), the radical Nationalist coalition sympathetic to ETA-militar which came second in the April municipal elections.

Volcker says dollar fall due to inflation concern

BY DAVID BUCHAN IN WASHINGTON

RECENT WEAKNESS of the dollar on international money markets should be taken as "a warning signal" of foreign anxiety about the U.S. inflation rate, Mr. Paul Volcker, chairman of the U.S. Federal Reserve Board, said yesterday.

The U.S. central bank chief said in a television interview that repetion of past dollar crises was "not probable." Last week's fall in the U.S. currency was partly due to the strength of the Deutsche Mark. But persistently emphasising the inflation threat, Mr. Volcker said: "The dollar is being questioned abroad because of concern over what is happening at home."

Mr. Volcker refused to predict how long and how hard the Fed might act to boost interest rates and to curtail the money supply, which he said had grown too rapidly in the past three to four months.

But he commented that a healthy economy should have positive interest rates, above the inflation level. Last week some U.S. banks pushed their prime rate, offered to their best commercial customers, to over 13 per cent—a level which matched the rise in consumer prices in the first half of this year.

Ghana's civil rulers to continue 'house cleaning'

BY MARK WEBSTER

GHANA returns to civilan rule today after seven years under a military government. Dr. Hilla Limann will become the third civilian leader of the country since independence in 1957.

Flight Lieutenant Jerry Rawlings, chairman of the Armed Forces Revolutionary Council, is expected to perform the official hand-over together with other members of the council. They seized power from General Fred Akuffo in a coup only four months ago.

The new regime is expected to continue the process of "house cleaning" started by the council when it came to power. But there will not be any more executions, according to the new President.

The council executed three former Heads of State when it came to power, including General Akuffo. The executions were designed to stop widespread corruption.

Dr. Limann, a 45-year-old economist, administrator, historian and diplomat, led the People's National Party to a convincing victory in recent general elections and will have an overall majority in the House of Assembly.

Iran loses $2bn by smuggling

TEHRAN — Foreign exchange worth $2bn has been smuggled out of Iran in the last six months, according to a senior according to a senior official of the Central Bank.

This is the highest official estimate so far of Iran's capital outflow since the February revolution. The official Pars news agency reported the official as saying that the government had not yet succeeded in stopping the illegal export of money.

Capital transfers have been regulated strictly by the Government since the revolution, but a thriving black market in foreign exchange has sprung up in Tehran where almost double the official rates can be obtained.

The country's official reserves, however, have been growing rapidly since oil exports resumed after the revolution and have now reached $12bn, according to officials.

The government's revolutionary projects office yesterday unveiled what it called a 22-year social and economic programme. Among other points, it called for restrictions on oil and gas exports.

The documents released by the office, which is run by Mr. Yadollah Sahabi, Deputy Premier, contained the guidelines for establishing a classless, godly society.

Millions of Iranian schoolchildren and students began a new academic year yesterday with instructions from Ayatollah Khomeini to watch their classmates for signs of anti-Islamic plotting.

The Ayatollah told them in a radio broadcast: "It is possible corrupt elements will penetrate your ranks. But do not treat the followers of other ideologies with violence. Sit and talk to them. If they prove to be plotters and saboteurs, then we will take another decision."

Reuter.

WORLD BANK ANNUAL REPORT

Third World growth seen as illusory

BY DAVID DODWELL

DEVELOPING COUNTRIES saw faster economic growth in 1978 than most industrialised nations, but this faster growth "provides no cause for rejoicing" according to the World Bank in its Annual Report published today.

Aggregate growth in 1978 for all developing countries was 5.2 per cent—compared with an overall 3.6 per cent for industrialised countries. This is well below the average 6.2 per cent growth rate recorded during the first half of this decade, and also disguises wide regional differences.

South Asia, dominated statistically by India, grew at a rate of 5.4 per cent, while east Asian nations managed an impressive 8.9 per cent growth. In contrast, growth in sub-Saharan Africa was 2.9 per cent, with the Mediterranean countries averaging 3.3 per cent growth.

"Figures for 1978, even though higher than for the industrialised world, provide no cause for rejoicing," the report says. "They reflect more the slow growth of the industrialised world than developing country advances."

Oil-importing developing countries saw their aggregate current account deficit on balance of payments deteriorate by $11bn to $32bn (£14.8bn) and the Bank warns of a "further substantial worsening" through 1979 to $42bn. This is due to continued slow growth in the industrialised world, and the huge increase in oil prices seen this year.

Against this the World Bank reports aggregate lending and investment commitments in the fiscal year 1979 of $10.44bn. The Bank itself lent $6.99bn. Credits from the International Development Association (IDA), the Bank affiliate that provides concessionary loans to the world's poorest nations, totalled $3.02bn.

The Bank made 142 loans to 44 countries, compared with 137 loans to 46 countries in 1978. At the same time the IDA made 105 credits to 43 countries, compared with 99 credits to 42 countries last year.

Bank lending in the agriculture and rural development sector fell by 14 per cent to 25 per cent in fiscal 1979, even though agriculture has been earmarked for extra resources.

This drop in lending, from $3.27bn to $2.52bn, occurred because the Bank approved fewer large projects (of $100m or more). The total of projects approved in the agriculture and rural development sector remained almost constant, however, at 84 compared with 88 in 1978.

The two sectors to see the greatest increase in bank lending in 1979 were transport and water supply projects. Loans approved for transport projects leapt by more than $800m to $1.9bn, increasing their share of bank lending by 6 per cent to 19 per cent. Loans for water supply and sewerage projects more than doubled from $375m to $1.0bn.

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Chinese imports of capital goods 'may reach $35bn'

TOKYO — China will need to import about $35bn (£16bn) worth of capital goods in the next six years for its modernisation plan, the Japanese Foreign Ministry has estimated.

Of the total, about $9bn is to be spent on industrial plant from Japan. The Ministry based this estimate on a survey con[illegible]ducted by a private Ja[illegible] economic research in[illegible] long-range prospect[illegible] Japanese econom[illegible]

The estim[illegible] prior to an [illegible]ssion's visit to [illegible] month [illegible]trial pro[illegible]de hydro[illegible]ions, railways an[illegible]ies.

According to the estimate, China's investment in about 120 modernisation projects should reach some $75bn, of which $35bn is likely to be spent abroad on plant.

The prospective Chinese plant purchases for the plan are likely to be concentrated in the period from 1980 to 1983.

● The semi-official Japanese Export-Import Bank said official loans supplied by the Bank under Japan's emergency import programmes totalled $3.62bn as of the end of last month.

The total comprised $1.71bn of enriched uranium, $190m of iron ore pellets, $90m of non-ferrous metals, $660m of ships and $970m of aircraft, mostly for leasing abroad.

Bank officials said total loans under the special foreign currency lending system for emergency import financing, due to end this month, are expected to reach $3.7bn, close to the original $4bn target.

Agencies

Japanese carrier raises Airbus, DC-9 orders

BY CHARLES SMITH, FAR EAST EDITOR, IN TOKYO

THE SMALLER of Japan's two internal air carriers, Toa Domestic Airlines, has ordered three more A-300 European Airbuses, following its initial purchase of six last May, it was announced on Saturday.

TDA, the first Japanese airline for more than a decade to buy European aircraft, opted for the Airbus after a 12-month evaluation process during which a close study was made of the relative merits of the A-300 and the DC-10.

The A-300 was chosen as being more suitable for the high density short-haul routes which TDA operates between major Japanese cities.

TDA's three additional A-300s will cost $120m (£55.7m) and will be due for delivery in 1983, following the delivery of the initial six aircraft in 1981 and 1982.

The airline is also expected to place orders in the near future for three DC-9 Series 80 aircraft. Five DC-9-80s were ordered earlier by TDA.

World Economic Indicators

INDUSTRIAL PRODUCTION

					% change over previous year	Index base year
	Aug. '79	July '79	June '79	Aug. '78		
U.S.	150.9	152.6	152.3	139.9	+ 7.9	1967=100
	July '79	June '79	May '79	July '78		
UK	116.4	117.1	114.7	111.7	+ 4.6	1975=100
Holland	122.0	125.0	121.0	123.0	− 0.8	1970=100
Germany	112.4	132.9	126.5	105.2	+ 6.8	1970=100
	June '79	May '79	April '79	June '78		
France	132.0	132.0	130.0	126.0	+ 4.8	1970=100
Italy	134.8	140.8	128.8	127.8	+ 5.5	1970=100
	May '79	April '79	March '79	May '78		
Belgium	123.9	127.8	126.6	119.5	+ 3.7	1970=100
	April '79	March '79	Feb. '79	April '78		
Japan	129.3	128.7	128.8	122.0	+ 6.0	1975=100

LOCAL AUTHORITY BOND TABLE

Authority (telephone number in parentheses)	Annual gross interest	Interest payable	Minimum sum	Life of bond
	%		£	Year
Barnsley (0226 203232)	12	½-year	250	3-5
Barnsley (0226 203232)	12¼	½-year	250	6-10
Burnley (0282 25011)	12½	½-year	500	5-7
Grtr. Manchester (061 247 3760)	12	½-year	1,000	2-3
Kirklees (0484 22133)	12	½-year	500	1½
Kirklees (0484 22133)	12¼	½-year	500	2
Knowsley (051 548 6555)	11¾	½-year	1,000	1
Knowsley (051 548 6555)	12¼	½-year	1,000	5-7
Oldham (061 678 4917)	11½	½-year	500	1
Oldham (061 678 4917)	12	½-year	500	2-3
Redbridge (01-478 3020)	11½	½-year	200	4-5
Redbridge (01-478 3020)	12¼	½-year	200	6-7

SHIPPING REPORT

VLCCs in demand but rates fall slightly

By Lynton McLain

THERE WAS active trading in most of the oil markets last week with prospects that the demand for large tankers may continue, at least to the end of the month.

Very large crude carriers were in demand, with most of the inquiries coming from Italy, France, the U.S. and Japan. However, rates fell rather than improved towards the end of the week and Shell, in the market for a 250,000-ton vessel, may succeed in cutting the rate from an expected Worldscale 50 to Worldscale 47½.

London brokers said Total and Elf dominated the market and demanded cuts in rates. Elf chartered a 205,000-ton vessel at Worldscale 45 for business between the Gulf and Europe.

Up to 6.5m tons of crude is expected to be moved out of the Gulf between now and the end of the month. Nineteen VLCCs and ULCCs are expected to be involved in the shipments.

The Mediterranean and the west African markets were less active than the Gulf, but rates remained high, particularly for cargoes to be moved out of Nigeria. The Caribbean Sea area also had rising rates.

Brokers also said that there was activity in the period chartering market. Vessels between 100,000 dwt and 150,000 dwt were chartered by Texaco and Sohio among other major oil companies. Texaco agreed to contracts for two years at U.S.$3.

Further inquiries are expected, including for chartering VLCCs for over 12 month periods.

Galbraiths said at the end of last week that more period charter business was signed in the first nine months of the year than in the whole of last year, and this could only be a "good omen for the near future at least."

On the bulk cargo markets, rates improved for medium-sized vessels trading in the Atlantic. Owners were reported to be more optimistic about prospects for October. The markets in the Far East continued to be active.

The strengthening of the Atlantic grain market also continued last week, particularly for large vessels. The rise was not steep, but the upward movement was welcomed by owners.

CAB actions draw protest from airlines

By Michael Donne, Aerospace Correspondent

THE WORLD'S airlines, through the International Air Transport Association, have protested to the U.S. Civil Aeronautics Board over what they believe to be unorthodox and unreasonable actions by that body in pursuing its case against the IATA's fare-fixing methods.

Some time ago, the CAB, as the governing body of U.S. civil aviation, threatened the IATA with loss of immunity from the U.S. anti-trust laws, unless the association could prove that its fares fixing methods did not violate those laws.

Over the past year, the association, its individual member-airlines and many of their governments, have all sought to persuade the CAB that its action is not only unreasonable, but also itself violates international air agreements and trespasses upon the rights of foreign countries to conduct their civil aviation affairs in their own way.

This campaign has had some success, in that the CAB has decided to restrict its attack on the IATA to fares policies affecting airlines flying to and from the U.S.

But in another recent move, the CAB has said that in the forthcoming hearing, starting on October 22, of its case against the IATA, it will not accept any oral testimony from persons who had failed to submit written testimony during August.

Solar units to be built in Spain

By Terry Dodsworth in Paris

THE International Energy Agency has announced two contracts for building solar electric power demonstration units in Spain worth a total of DM48m (£12m).

The two projects, to be managed for the eight participating countries by DFVLR, the West German Air and Space Agency, will be used to test two rival techniques for producing solar power.

This is one of a number of collaborative projects programmes being conducted under the IEA auspices to develop alternative energy sources which will reduce the dependence on oil.

The eight countries involved are Austria, Belgium, Germany, Greece, Spain, Sweden, Switzerland and the U.S.

One of the contracts, for a "central receiver" type of solar power plant, has been awarded to Interatom of Germany at a value of DM26m.

The second, for a DM22m "distributed collector" type plant, has gone to an international consortium which includes Acurex of the U.S., MAN of Germany and Technicas Reunidas of Spain.

COLOUR TV EXPORT CURBS

A bitter lesson for S. Korea

BY RICHARD C. HANSON, RECENTLY IN SEOUL

SOUTH KOREA'S once booming colour television industry appears to be turning into a classic example of what happens when the industrial world decides to "protect" its markets against imports from newly industrialised developing countries.

The South Koreans had hoped to challenge the Japanese in the field of colour television exports, and spent large amounts of money on building facilities which could compete with the Japanese electronic giants. Three major Korean companies—Samsung, Gold Star (of the Lucky Group) and Taihan—invested an estimated $175m in colour TV and component production facilities, giving the industry an annual capacity of 1.2m sets and 1.5m colour TV tubes.

The electronic industry association now estimates that these facilities will operate this year at only 20.8 per cent of that capacity as a result of the orderly marketing agreement reached earlier this year with the U.S. The American market had absorbed 520,000 Korean sets in 1978, out of total colour TV exports of 576,000 units (South Korea itself has yet to allow colour TV broadcasting which means all production must be exported).

The orderly marketing agreement with the U.S. allows for only 288,000 sets to be imported from South Korea during a period which started last February and runs until June, 1980. In the first seven months of this year South Korea has already shipped 220,000 sets to the U.S. It is estimated that total exports this year will amount to about 350,000 units, down 35 per cent from 1978.

Colour TV exports only began in 1974, with 4,254 units exported to the American market. This increased spectacularly to 109,000 sets in 1977 and 576,000 in 1978 as new large-scale production facilities came on line. An orderly marketing agreement, which sharply curtailed Japanese exports to the U.S., from 1978 onwards also served to increase demand for TVs from other countries like South Korea, Taiwan and Singapore. But pressure quickly built up in the U.S. to restrict these imports also.

South Korea, however, considers that it is being hurt more than its competitors. Japan has shifted most of its production for the U.S. market to plants in the U.S. and is able to export parts and incomplete television kits. Taiwan and Singapore, in addition to a quota for built up models, have quotas for kits. South Korea has neither a quota for kits (which it did not export before) nor the financial resources to invest in production facilities in the American market.

The result is that while S. Korea ranked second in colour set exports to the U.S. in the January-July period this year with 220,000 units (Japan exported 334,900, with Taiwan third at 217,000 units) incomplete set exports from Taiwan alone amounted to 374,500 units.

During the first quarter this year, S. Korean producers found little comfort in newspaper reports that in the first quarter of this year their colour TV exports had temporarily surpassed those of Japan. With losses industry-wide running at over $200,000 a month to meet interest payments and maintenance fees, the industry faces troubles which can only be overcome by a great deal of Government co-operation or by a change of heart in the U.S during quota talks next month. Europe, which has so far refused to license the S. Koreans to produce the PAL colour system could also help—but appears unlikely to do so.

The television industry is waging a vigorous campaign at home to push the Government into allowing colour television broadcasting. But economically this appeal could not have come at a worse time for the Government apparently feels that the country has not yet developed to the stage where people should be able to afford a colour television set.

By allowing colour sets on to the home market, the Government fears that already falling rates of vital personal savings would be reduced further. Soaring consumer inflation (estimated this year at up to 30 per cent) has eroded spending power.

South Korea does export colour sets to a few other countries which use the same system as the U.S., like Canada, Chile and Panama, but the markets are small. Moreover, the cost advantages that South Korean products have over Japanese sets has been sharply eroded both by wage and commodity inflation and by the loss of large-scale production built up for the U.S. market. Taiwan and Singapore, which have been more successful in holding down inflation, are producing televisions more cheaply.

As an alternative to colour TVs, South Korean makers are trying to develop their own video tape recorder system (VTRs) after having been shut out of technology-sharing agreements with the Japanese. Gold Star hopes to begin marketing these sometime next year.

It also appears doubtful that the South Koreans can catch up technologically with the Japanese. South Korean colour television makers have been dependent on Japan for about 60 per cent of components. Even by manufacturing their own picture tubes, the South Koreans have only been able to lower the ratio to about 30-40 per cent.

South Korea can hardly be faulted for wanting to build a colour television industry of its own. Having such a capability is essential in establishing an overall sophisticated electronics industry, which the country is still depending on as a major export earner long into the future. South Korean businessmen are somewhat justifiably upset at being shut out of the U.S. market at a stage when their actual share had not begun to approach the scale of the Japanese.

Canada removes dumping duties

OTTAWA — CANADA'S anti-dumping tribunal has rescinded a finding that Canadian producers are being injured by the dumping of colour television sets with 16-in or larger screens from Japan, Taiwan and Singapore. The new ruling will result in the lifting of anti-dumping duties that have been applied since 1975.

Last year several Japanese companies and three Japanese-owned Canadian producers asked the board to review and rescind its 1975 finding. The three Japanese-owned Canadian companies were Hitachi Sales Corporation of Canada, Panasonic Industries and Sanyo Canada.

Only two other companies produce colour televisions in Canada of these Electrohome supported retention of the anti-dumping ruling while RCA did not take a position.

The tribunal said the Canadian manufacturing industry has suffered substantial losses since 1975 with five companies abandoning production. Since the industry was protected from dumping during that time the problems must be related to other factors.

AP-DJ

S. Africa to triple output of polymer

By Quentin Peel in Johannesb…

SOUTH AFRICAN product… of low-density polyethylene i… be tripled by the building o… manufacturing plant by AE… the country's leading chemic… group, based on a lice… agreement signed with Un… Carbide of New York.

The R150m (£84.5m) plant… be in Sasolburg, will use Un… Carbide's low-pressure Uni… process to produce 150,000 t… of polyethylene annually, w… commissioning of the first u… expected in the latter half… 1981.

The plant will be alongs… AECI's existing high-press… process factory, which produ… some 75,000 tons a year.

Announcement at the we… end of the licensing agreem… and investment is the latest… a series of major investm… decisions by the South Afri… chemical industry designed… reduce South Africa's depe… ence on strategic raw materi…

Earlier, Sentrachem, … country's second ma… chemicals group, announced… plan to replace all rub… imports with locally produ… synthetic rubber.

AECI, in which Britain's … holds a substantial mino… stake, along with South Afri… De Beers, is already the ma… partner in a joint project w… Sentrachem at Coalplex, … ducing PVC from anthracite…

The new polyethylene pl… will also be using coal as … original feedstock.

A company spokesman … the Union Carbide product… process would enable the pl… to be built at a lower cap… cost than conventional pla… would produce a comprehens… range of polyethylene produ… and provide new grades of … material to allow downstre… producers to diversify i… packaging and pipe manu… ture.

UK NEWS

Building societies search for fund formula

BY MICHAEL CASSELL

THE BUILDING societies have so far failed to agree on the best way to establish a deposit protection fund for their investors.

Work on devising a fund to protect investors hit by a building society collapse began nearly 18 months ago after the failure of the Grays Building Society. The societies are aware that, unless they produce their own formula for a fund acceptable to themselves, the Chief Registrar of Friendly Societies and the Treasury, they face the prospect of having one imposed on them by statute, as in the case of the banks.

The Government wants to see some form of building societies protection scheme. In any case, the deposit-taking institutions must all establish a "safety net" system before the EEC banking directive takes effect.

Although the societies are understood to have drafted the outlines of a protection scheme, which would comply with the relevant section of the Building Societies Act, they have failed to agree on whether the scheme should be voluntary or statutory.

The division of opinion runs across the movement, from the small societies to some of the largest. The Building Societies Association intends to hold further talks with the Government to spell out the difficulty and to obtain Ministers' views on the best course of action.

A lot will depend on the Government's determination to see a formal scheme, for the easiest way out of the societies' dilemma would be for them to simply rely on their previously demonstrated ability—as in the case of the Grays—to act effectively in a crisis.

At the centre of the disagreement is the belief by some societies that the task of justifying to shareholders their financial commitment to any protection scheme would be made a great deal easier if they had no choice but to participate. Compliance with the law, they claim, would leave no room for debate. On the other hand, participation in a scheme agreed among societies might be hard to sell to members. If a voluntary scheme is to be operated, every society must agree to take part.

The scheme, whether voluntary or statutory, is thought to be similar to the one covering the banks and included in the Banking Act. The banks' scheme is due to take effect in about six months.

A "modest" standing fund would be e stablished and then societies would be expected to contribute in the event of a building society failure. Their contributions would probably be determined within a system of graduated bands related to assets.

The societies have not agreed on the extent of cover the fund would provide, although it seems likely that depositors could expect to be safeguarded for up to 75 per cent of their investments.

Steel cuts defended by Villiers

BRITISH STEEL'S cuts in plant and labour have not proved as socially damaging as critics predicted, according to Sir Charles Villiers, the corporation's chairman.

Sir Charles, who is due to retire from the chairmanship of BSC when his contract ends in September next year, said he would dispute claims that the corporation was being socially irresponsible in shutting down works.

"To leave a dying business in a community is to leave the community without hope, and it will keep on going down," he said.

While he said he was "deeply conscious" of the socially damaging effects posed by closure, the greatest fears usually proved to be exaggerated.

● There were demands for Sir Charles's resignation yesterday after his call to middle management on Saturday to accept nothing but the highest standards. "Reject bad work: be bastards when you are asked to accept 'near enough' or 'second best'," he said."

Mr. Martin Flannery, vice-chairman of the Tribune Group and MP for Sheffield, Hillsborough said in response: "Any man who tells his management to be bastards is not fit for the job and should get out now."

BL seeks Japanese car exports pledge

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

BL IS to press Japanese car makers for an unqualified assurance to restrict their share of the UK market to 10 per cent in 1980.

This unprecedentedly tough approach will be taken by Mr. Pratt Thompson, recently appointed chairman of BL International, who leaves with a small deputation from the UK Society of Motor Manufacturers and Traders for Japan today.

In the past the Japanese manufacturers' association has given rather vague assurances to the UK about restricting exports. But when talks begin on Thursday, Mr. Thompson will insist on an agreement that will really bite.

The society is particularly concerned about the level of Japanese car shipments to the UK this year — 136,000 by the end of August, compared with 143,000 for all the 1978.

The figures indicate that the importers will have large stocks with which to enter 1980.

In spite of previous agreements by the Japanese industry over shipments and, last year, a vague assurance it would take a "prudent" view of the UK car market, registrations have risen steadily from 84,000 in 1974 to 174,000 in 1978, 135,000 in the first eight months of this year and a potential 185,000 for 1979 as a whole.

This has boosted the Japanese penetration to 10.5-11 per cent of the UK new car market.

If the Japanese industry accepts the BL suggestion it would cut registrations back to around 150,000 in 1980. The UK market is expected to drop from a peak 1.68m this year to around 1.5m next year.

The society seems to have taken the view that BL should make the running in the talks because, instead of the usual full industry delegation, only society staff will accompany Mr. Thompson. The UK industry argument has always been that the Japanese should hold back until BL recovers.

Arthur Smith Midlands Correspondent, writes: Decentralisation of BL Cars management is being pushed further in the wake of plans to close plants and shed more than 25,000 jobs.

Jaguar Rover-Triumph's sales and marketing is to be merged with that of Austin-Morris under a new company, BL European and Overseas Operations. Head of the organisation is Mr. Tony Ball, formerly deputy managing director (commercial) at Austin-Morris.

The role of Mr. Ray Horrocks, recently appointed managing director of BL Cars, is enlarged.

The exception to the unified sales operation will be Land-Rover, where a £280m programme nearly to double output of Land-Rover and Range Rover is already being pushed through.

Land-Rover was pulled out of the Jaguar Rover Triumph structure several weeks ago, and required to report direct to Mr. Horrocks. Jaguar is also to be given a more independent role with separate responsibility to Mr. Horrocks.

Mr. Percy Plant, appointed recently to review Jaguar Rover Triumph operations, will remain as chairman of Jaguar and Rover-Triumph.

Pressed Steel Fisher, formerly part of BL Components, will operate as a separate company with Mr. Horrocks as chairman.

Heathrow option under study again

By Michael Donne, Aerospace Correspondent

THE POSSIBILITY of developing a fifth passenger terminal at Heathrow Airport instead of an entirely new third major airport for London and the south-east appears to be re-emerging in airline and government thinking.

It is only one option the Government might consider in trying to settle the controversial debate over airports policy, and no decisions are likely for some time.

The Government has first to settle the outstanding question of whether to permit the fourth passenger terminal at Heathrow, to raise passenger capacity there from 30m to 38m passengers a year.

Any proposal for a fifth terminal would also have to await the outcome of current investigations by the South-East Airports Study Group on the best site for a possible third airport, and longer term studies by the Advisory Committee on Airports Policy into a national airports plan.

British Airways is believed to be pressing for a fifth terminal in the long-term, to prevent it having to move services to another major airport. Foreign airlines at Heathrow also support the idea, to obviate the need for some of them to go to Gatwick.

Press 'playing into IRA hands' says Lynch

MR. JACK LYNCH, the Irish Premier, has accused certain sections of the British media of playing straight into the hands of the terrorists they purport to condemn by recent comments on Irish affairs following the killing of Lord Mountbatten.

In a week-end speech, Mr. Lynch said: "If certain writers and broadcasters had deliberately set out to distort facts and upset relations between the Irish and the British peoples, they could not have done a better job."

High savings repayments

DISAPPOINTINGLY high repayments have largely cancelled out the high level of new money deposited last month in the National Savings Investment Account.

Receipts of £44.2m were the highest since January. They were undoubtedly stimulated by anticipation of the increase in the interest rate to 12½ per cent from September 1. But repayments — at £35.7m — were also above average, leaving a net investment of £8.5m.

Total National Savings receipts for August were £252m. After repayments of £194m, the net increase was only £57.7m, including accrued interest.

The Index Linked National Savings Certificates Retirement Issue had a net intake of £22m. Fixed interest National Savings Certificates and premium savings bonds had a poor month, with net decreases of £5m and £3.6m.

Labour 'should consider deal with Liberals'

BY OUR LOBBY STAFF

THE LABOUR Party may have to consider doing a deal with the Liberals before the next election if it is not to get consigned to permanent opposition, a Labour MP has warned.

In a Fabian Society pamphlet, published to coincide with the start of the party conference season, Mr. Austin Mitchell, MP for Grimsby gave a bleak analysis of Labour's election defeat and prospects and warned that unless the party re-appraises both its policies and strategy, Labour will fail to attract new voters and be forced to fall back on a diminishing band of traditional Labour voters who on their own will not be enough to get the party into power.

To be elected again, he points out, the party will have to put less emphasis on such issues as nationalisation and push more popular issues like attacking the EEC.

One possible solution to this situation, he argues, might be to exploit what the Liberals regard as the inadequacies of the present first-past-the-post voting system, and use it as a basis for a deal.

In another pamphlet published at the weekend, the Fabians spelled out the figures behind the row over the party's organisation. Nominal membership, it says, has fallen to almost 250,000 while a shortage of cash means that only two-thirds of the constituency parties can afford to send a delegate to the annual conference and so take part in what is supposed to be the party's democratic policy making process.

Beet growers take legal action

SUGAR BEET growers, who lost about £2m through frost damage last winter, are to take legal action against the British Sugar Corporation.

The National Farmers' Union is to support a test case in which one of its members will seek compensation from the corporation.

An estimated 97,000 tons of beet rotted on farms during the 1978-79 campaign, following factory delivery problems.

The corporation denied growers' claims that it mismanaged the processing campaign, but Mr. Tom Morgan, chairman of the NFU's sugar beet committee, told producers that he would do all he could to get compensation for everyone who had fulfilled contractual obligations.

ELINOR GOODMAN ON THE EVE OF THE MARGATE CONFERENCE

Liberals sense an era of opportunity

THE Liberal Party will this week plot how to maximise the opportunity which it is convinced will be presented to it over the next few years as Labour tears itself apart and the Conservatives move further to the Right.

At their annual assembly in Margate, the Liberals, in a series of "commissions" and a fully fledged session on philosophy — which no other party would dream of putting on the televised agenda but which for many Liberal activists is what being a Liberal is all about — re-state those beliefs which distinguish them from the other parties. They will then consider how to adapt the message they have preached over the last few years about their willingness to co-operate with other parties to the very different parliamentary circumstances of today.

Since the conference organisers allow practically any delegate to speak in their desire to demonstrate the party's belief in freedom of speech and democracy, the message from Margate over the next week may not always seem a particularly coherent one as speakers use the rostrum to plead their own particular cause. But, by the end of the week, it should be possible to detect the broad shape of the party's strategy and, in particular, how far it intends to associate with the ecological cause.

Alternative

On Friday, Mr. David Steel, whose performance during the election campaign won him the gratitude of even those candidates who regarded his pact with the Labour Government as an electoral disaster, will unveil his strategy. Typically, the role he sees for the Liberals is a central one. The party, he is expected to say to the undoubted delights of the 1,200 or so delegates, should provide the leadership and focal point for all those who over the next few years will be looking for an alternative to the present system.

What he seems to have in mind is nothing so prosaic as a third party, but a wider movement which will encompass all those dissatisfied with the way things are developing. His general message looks like being that the party should not worry unduly about having lost the balance of power at Westminster because the opportunities provided for the Liberals over the next few years in the country at large will be greater than ever before.

The message is likely to go down well with the delegates who in any case are in much better spirits than they expected to be a year ago, when everything seemed to be conspiring against them. Though their representation at Westminster has been cut by three to 11, the election result was by no means as bad as had been feared. The party traditionally does best in by-elections when the Tories are in power and this time it goes into a period of Conservative government with a much higher base of support than in similar periods before.

Moreover, the party is no longer encumbered by the tribulations of its former leader, Mr. Jeremy Thorpe, whose appearance last year at Southport dominated the conference, is not coming to Margate.

The issues likely to dominate this year's assembly are likely to be of less interest to the outside world than the comings and goings of Mr. Thorpe, but of much more concern to the delegates who regarded the Press's obsession with Mr. Thorpe last year as thoroughly bad taste. The only real fireworks look like coming during the debate on Northern Ireland, when the parliamentary party will be determined to kill off a Young Liberal amendment which would commit the party to the objective of a united Ireland within the EEC.

Of more fundamental importance in the long term, however, could be the debates on strategy and economic policy. The Young Liberals, less noisy than they once were, have put down a motion which would commit the Liberals to a policy of no-growth on the grounds that it is neither achievable nor ecologically desirable. Mr. Steel himself seems to believe that the ecologists are right to stress things like the quality of life, but he must be aware of the dangers of the party becoming too closely identified with what one of his aides describes as the "econut" fringe." Richard Wainwright, who took over as economic spokesman when John Pardoe lost his seat, has put down an amendment to the no-growth motion, but even so, the signs are that the leadership will take on board at least some of the points made in today's day-long "Ecology teach-in."

Disparate

In theory, the annual assembly is the sovereign policy-making body in the Liberal Party and the parliamentary party would risk trouble if it ignored the views of the activists who attend the conference. But the assembly is regarded less reverentially than in the Labour Party where the decisions are supposed to have the absolute authority of the tablets of stone. Nor is it the carefully dressed party shop window which the Conservatives put on show each year.

The Liberals are aware that with no election in the offing, they will be lucky to have much media attention this year once their conference is over, but delegates tend to be uncomfortable about obvious attempts to stage manage things for the benefit of the cameras. The result is that they tend to come across as a disparate group united more by earnest niceness than by a fixed ideology.

For most of the people who attend — and some do go to extraordinary lengths to get there, such as hitch hiking — the assembly is a time to reaffirm their faith in the party and reassure themselves that though they may be a minority in their particular area, they are not working in isolation. Some may come in the hope of influencing the party's direction. But most would agree that in the next few years, the Liberals' performance will depend as much on the other parties as what it does itself. This will not prevent some delegates spending the next five days happily thrashing out the policies which a Liberal government would adopt.

LABOUR NEWS

Engineering strike call could be backed by 1m

BY CHRISTIAN TYLER, LABOUR EDITOR

NEARLY 1m engineering workers are expected to support their unions' strike call in the fourth two-day stoppage today and tomorrow.

In spite of the increasing alarm among employers in the industry about the effects of the unions' overtime ban and three-day week, both sides are deeply entrenched after the collapse of the last negotiations.

The Engineering Employers Federation seems determined to go all out for victory, and prevent any breach of the 40-hour standard working week. They fear that such a breach might spread across the industry.

A federation spokesman said employers' attitudes were hardening the longer the battle continued. "We are prepared to see it out. We can see no alternative and we cannot expose the industry to irresponsible risk," he said.

The employers believe that trade union loyalties are becoming severely tried by the repeated stoppages, but admit that no significant revolt has materialised.

Mr. Terry Duffy, president of the Amalgamated Union of Engineering Workers, claimed yesterday that a further 11 EEF member companies had conceded the unions' claim for an £80-a-week minimum rate for skilled men and one hour off the working week. This brought the total of to 50 federated companies. He said there were now almost 500 companies (including non-federated) who had conceded. They accounted for 20,000 workers.

Mr. Duffy's figures were strongly contested by the federation. It said it knew of only 18 member firms which had given in.

There are signs that British Timken in Northampton, which is an EEF member, is about to settle. Its 2,500 workers at the roller bearing plant will not be joining the strike today while shop stewards discuss a settlement.

About 340,00 workers out of the 1¼m directly covered by the national agreement did not join the strike last week, according to EEF estimates. Suport will be more difficult to estimate this time because companies in the East and West Midlands are on holiday.

Severity of health cuts attacked

BY OUR LABOUR EDITOR

THE SOCIETY of Civil and Public Servants said today that Government plans for health service cuts are so severe that their publication would cause major public disquiet.

The union claims that at a recent meeting with Mr. Patrick Jenkin, the Health Secretary said some cuts under Cabinet consideration were such that "no government which had not taken leave of its senses would implement in the short term."

Mr. David Heywood, the society's assistant secretary, said the unions were being denied consultation on plans and the public was being denied the "fundamental democratic right to public debate."

The DHSS was the only major department to refuse to discuss the 10, 15 and 20 per cent options for staff cuts that ministries have been told to investigate for the Cabinet.

● Full support for members who fight public services cuts will be given by the National and Local Government Officers Association, Mr. Geoffrey Drain, general secretary, said at the weekend.

"NALGO will pursue with the utmost vigour its campaign at national and local levels to secure reversal of Government policy," he told union members in West London.

"All our members and branches in every service have been alerted to fight the cuts wherever the authorities seek to apply them."

The union will support the TUC campaign against "viciously anti-social policies," Mr. Drain said.

Emergency TV service possible

ITV EXECUTIVES could themselves attempt to transmit the new autumn programmes if the six-week-old strike is not settled soon.

Programme heads are meeting later this week and will decide whether to mount a makeshift programme schedule.

The possibility of managements transmitting a service follows the breakdown of talks on Friday between the companies and the three unions involved in the dispute.

Mr. Paul Fox, a member of the ITV negotiating team and managing director and director of programmes for Yorkshire Television, said yesterday that in the last big ITV strike in the 1960s an emergency service went out, and he thought the companies would have to look at ways of transmitting a similar service.

The companies are concerned because under the IBA Act, which set up ITV, they are "legally bound" to provide a service for viewers.

Protest over Chile envoy plan

THE TRANSPORT and General Workers Union has written to Lord Carrington, Foreign Secretary, and to the Prime Minister, urging the Government not to appoint an ambassador to Chile "until freedom and democracy are restored."

The union executive was addressed last week by Sra. Hortensia Allende, wife of the former president of Chile. The union will maintain a boycott of Chilean goods, and is consulting other transport unions with a view to sending a joint delegation there.

The union has also protested about the proposed tour of Britain by the South African rugby team.

Merger 'likely'

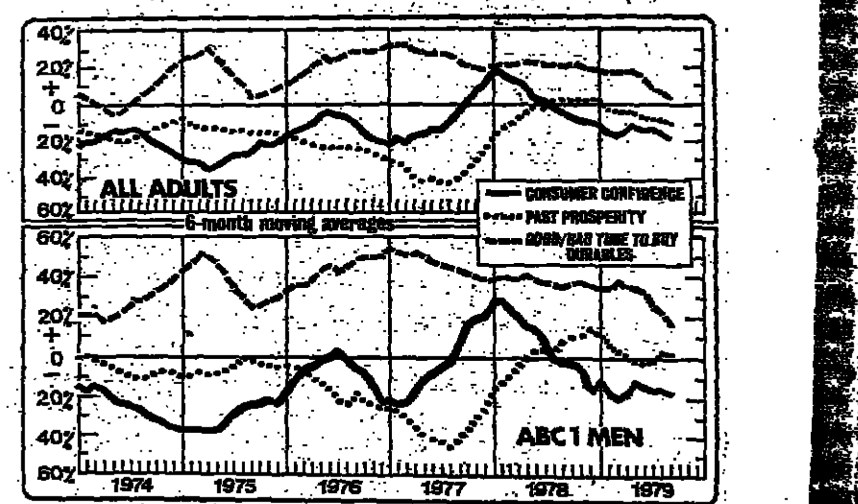
THE ELECTRICIANS' union hopes of securing a merger with the small, non-TUC, UK Association of Professional Engineers were strengthened yesterday.

At a meeting in Nottingham UKAPE reportedly decided to send its members a recommendation tht they join the electrician white-collar section, EESA.

FT SURVEY OF CONSUMER CONFIDENCE

Industry unrest causes increased pessimism

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT



CONSUMER CONFIDENCE, which fell sharply after the Budget, has still shown no signs of recovery, according to the latest Financial Times survey of consumer confidence published today.

Although the main reason for consumers' pessimism is still rising prices, the spate of industrial disputes was cited by an increased number as a reason for concern.

The September index of future confidence was minus 32 per cent, the same as for August. In both June and July the index was minus 29 per cent, which contrasted sharply with the plus 9 per cent index in June.

In September, only 14 per cent of consumers surveyed expected conditions to improve, while 46 per cent expected them to worsen. The rest expected no change in future conditions.

The continued low level of monthly future confidence has also pushed the six-monthly index—which shows the longer-term trend—down to minus 19 per cent (from minus 16 per cent). This is the lowest six-monthly index since the middle of 1977.

The survey showed that the number of strikes, especially the independent television and engineering disputes, were seen increasingly as a reason for pessimism. About 26 per cent of those surveyed cited this reason, compared with 16 per cent last month and 11 per cent in June.

Inflation

This concern over industrial unrest has distracted some consumers' attention from the rising inflation rate. About 34 per cent gave inflation as the main reason for pessimism, compared to 40 per cent last month and 48 per cent in July.

There was also a sharp fall in those believing the Conservative Government to be a reason for pessimism. The number dropped from 30 per cent last month, to 19 per cent in September. Significantly, the energy crisis and specifically the petrol shortage was cited by only 1 per cent of those surveyed, compared with 15 per cent in July.

In contrast to last month, when the fall in the index was entirely accounted for by the C2DE (manual workers) social sub-group, in September this was the only sub-group to show an increase in confidence (plus 8 per cent). This was counterbalanced by the evenly spread falls in the confidence levels in the other three sub-groups, giving an overall static index.

The index of past prosperity also derived from the survey has fallen sharply this month. Some 22 per cent of those surveyed sonsidered themselves better off than a year ago, while 41 per cent felt worse off. This gives an index of minus 19 per cent, compared with minus 14 per cent last month. In May, the index stood at minus 1 per cent.

Analysis of the survey shows that the index for ABC1 men (professional and executive) fell 13 points to minus 9 per cent, while that for C2DE men dropped ten points to minus 23 per cent. However, both women's sub-groups have increased over the past month, although the index for C2DE women still remains the lowest at minus 27 per cent.

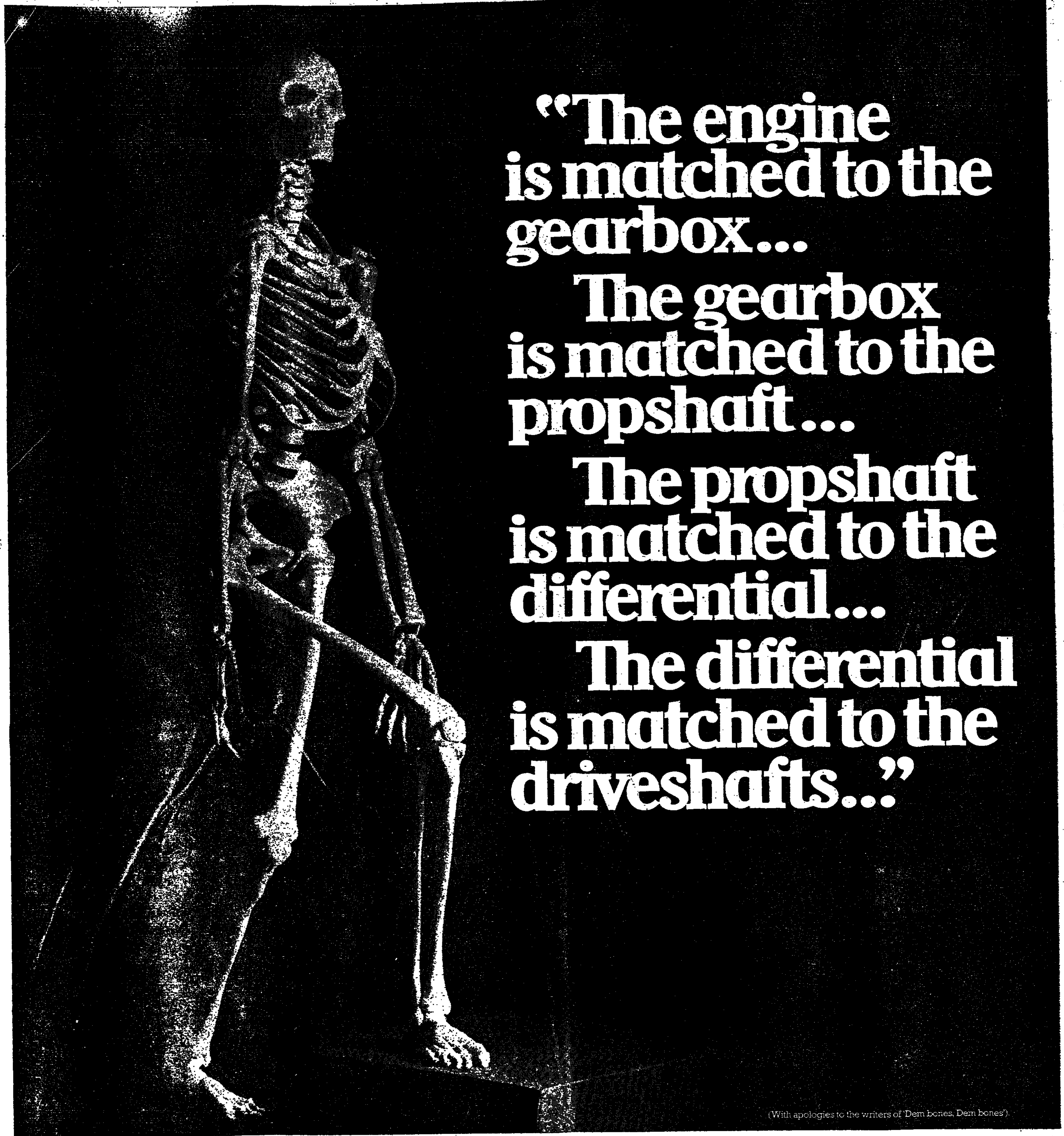
The September survey showed an eight-point increase in the index about expenditure plans. For the first time since May, the index of time to buy consumer durables showed a positive score at plus 4 per cent. Some 36 per cent of those surveyed felt that now was a good time to buy, while 32 per cent thought it was not. In May, the confidence associated with the Conservative's General Election victory as well as the usual pre-budget buying spree, took the index to plus 25 per cent. However, the sharp VAT increase announced in the budget pushed the index to minus 17 per cent in July.

The recovery in the consumer durables index was almost entirely due to the increased buying intentions in the ABC1 social groups. The index for ABC1 men rose 12 points to plus 22 per cent, while for ABC1 women the rise was 11 points to plus 25 per cent. The index for C2DE women rose 11 points to minus 9 per cent, but for C2DE men the increase of three points gave an index of minus 1 per cent.

An extra question included in this month's survey suggested that most people would spend their tax rebates due in next month's pay packets. The proportion of those planning to spend their rebates—46 per cent—was the same response as following the Budget. The same proportion—16 per cent—said they would save the extra income, while a quarter thought they would get no extra income from the tax rebate.

The unemployment index in the survey showed a slight recovery this month. Some 45 per cent of the survey thought that unemployment would increase, while 11 per cent thought it would decrease. This gave an index of plus 34 per cent, compared with plus 38 per cent last month.

The Financial Times Survey of Consumer Confidence was carried out between 6 and 12 September by the British Market Research Bureau on behalf of the Financial Times. A sample of 992 adult was interviewed.



As a totally matched system, there's no better example than the human skeleton.

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VOLVO TRUCKS (GREAT BRITAIN) LIMITED, IRVINE, SCOTLAND.

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● MATERIALS

Board with a glass fibre surface

JUST PATENTED in Belgium is a material which could be of major interest to the building industry, both because of its cheapness and because of the superior properties which it can be given compared with existing and competing structural boards.

It is, basically, a plasterboard in which the cardboard is replaced by a mat of glass fibre. This sheet of fibre is made in such a way that, on the outside, the hairfine fibres are stuck together with a synthetic resin, while on the inside—projecting downwards into the gypsum matrix—there is a forest of fibres, still attached at one end to the matt by a dot of resin.

Thus, the external surface is made relatively smooth and to a large extent self-coloured, while the internal surface provides both a key and the reinforcement.

The Belgian developer, who has so far made a large number of demonstration "pieces." says that so far as can be judged, wallboard made according to the process he has patented could cost as little as one-third of comparable products quarter to one-third of comparable products and will not increase markedly in price since it is not dependent on sensitive raw materials for its manufacture.

But apart from interior and exterior wallboard or wall panel, other products which could be made in this way include finished external structural units with a brick-like aspect; multi-coloured floor tiles; roof tiles; window frames and even internal doors.

In the manufacture of the wallboard, for instance, drying or curing is very fast and dimensional stability is exceptionally high. The end-product is highly fire-resistant and is not affected by humidity. Thermal and acoustic performance is good.

Decoration of the installed panels poses few problems and the developer has sought to simplify the method of attachment to the skeleton of the building so that assembly will not demand expensive handling equipment nor specially trained installers.

The company, Decorunic, at rue de Heuseux 3, 4511 Barchon, which is in the Liege area of Belgium, will consider the granting of licences and is also prepared to enter into joint development projects.

Enquiries to M. A. Kulbach on Barchon (041) 87 55 76. For UK 010 32 41 8755 76.

● ENERGY

Captures sun power

STUART TURNER, of Henley-on Thames, has donated one of its Cygnet condensing steam engines to the National Centre for Alternative Technology. This Cygnet engine, which is available in kit form, is being used in a new solar-powered installation for pumping water or generating electricity, which will be supplied with heat from a bank of four sun-tracking concentrating collectors.

Each collector incorporates a set of reflectors which concentrate the sun's rays on a black-coated copper tube filled with oil, running down the centre of the unit.

The steam which drives the Cygnet is created by passing hot oil from the collectors through a heat exchanger which contains a spiral of small-bore tube into which cold water is pumped. The heat from the oil boils the water and the steam is then carried through to the engine. The system operates at approximately 150 degrees C.

The Centre estimates that the collectors generate approximately seven kilowatts of heat energy and that the Cygnet will be able to drive a dynamo capable of generating 0.5 kilowatts of electricity.

Stuart Turner, Henley-on-Thames, Oxon. 04912 2655. National Centre for Alternative Technology, Machnylleth, Powys. Machnylleth 2400.

● DATA PROCESSING

Choice of five languages

IT IS A sign of the times that the number two mini-manufacturer, Hewlett-Packard, describes its latest offering to the market (Koala) as an "entry-level" machine, a term hitherto retained for the use of the main frame fraternity.

HP3000, series 30, starts at just under £28,000. Nevertheless it will handle applications in any of the five languages offered on larger machines in the series without modifications.

Distributed system network (DSN) capabilities apply, including remote data base access, file sharing, and program-to-program communications.

The basic machine has 256 bytes of error-correcting semiconductor memory, a 1-Megabyte flexible disc, four asynchronous terminal ports, system/maintenace console, 20-Megabyte system disc, and eight powered input-ouput expansion slots. A maximum configuration would contain 1024K-byte main memory, 960 Mbyte disc storage, up to 32 terminal ports, 4 magnetic tape drives, and 2 line printers. Up to 2 communication lines can be added, with each line replacing 4 terminal ports.

Series 30 can execute programs written in COBOL, BASIC, FORTRAN, RPG, or SPL, Hewlett-Packard's own high level systems level programming language. Any or all of these languages may be ordered for program development as well.

Hewlett-Packard, King Street Lane, Winnersh, Wokingham, Berks. RG11 5AR. Wokingham 784774.

More user options

DATA SERVICES division of Control Data has announced a new service called NCS or NOS Computing Services.

Designed eventually to take over from the existing SCOPE (Batch) and NOS (Timesharing) services that Control Data supplies, the new system offers more facilities and improved cost-effectiveness.

NCS is a development of the existing NOS timesharing system with the ability to handle access from both interactive and remote batch terminals concurrently. This makes it possible for batch users to carry out interactive editing of both input and output much more easily than before and certain of the existing batch applica tions are being mounted on NCS with new or enhanced pre- and post-processors.

Timesharing users have access to a wider range of packages, plus the ability to run their larger jobs in batch mode in a much more flexible manner than before.

Introduction of this new service follows on from the announcement made in June of the massive investment Control Data has been making worldwide in its Data Services operations and of the linking of several European centres with the CDC network.

CDC, 179, Shaftesbury Avenue, London WC2H 8AX. 01-240 3400.

Smaller and cheaper

SCOUT IS the name given to the reduced size lower cost Naked Mini, model 4/04, launched by Computer Automation.

A typical arrangement of four boards and power supply is under half the size of an existing LSI 4/10 for unchanged performance. The board size of 6.25 × 8.3 ins (160 × 215 mm) should enable CA's customers in industrial control, business systems. data communications and laboratory equipment to reduce the size of their own products.

Price of the Scout systems will be about 20 per cent less than the LSI 4/10.

Introduced in this particular model is the Isolite self test system which enables the user to check each board whenever the power is turned on. Light emitting diodes provide "go/no go" indication and failed boards can be replaced in a few seconds.

Scout uses the full LSI 4/10 instruction set to ensure upward software compatibility and any Naked Mini 4 software development system can be used to write applications programs.

More from Hertford House, Maple Cross, Rickmansworth, Herts WD3 2XD (Rickmansworth 71211).

● ELECTRONICS

Power unit for steady supply

TO MEET demand for a reliable, low-cost and efficient domestic ac supply controller, Network Electronics has developed a regulator, using a custom-designed integrated circuit employing the Ferranti ULA concept.

ULA (Uncommitted Logic Array) offered Network a fast and low-cost route to its own design of chip with an on-chip component packing density comparable with any other high volume large scale integrated circuit process.

It has been apparent to manufacturers for some time, that a more efficient ac mains regulation device is needed in the many countries that experience extreme voltage fluctuations. As these countries are using more and more television receivers, hi-fi equipment, freezers, and so on, the pressure for appropriate regulator is becoming more acute.

The new NW299-01 circuit can be supplied either as a component for incorporation into a manufacturer's own ac supply control unit, or in a complete unit.

The latter is currently in production in the UK for export markets, and a manufacturer in Turkey will soon start high volume production for the Turkish domestic market.

Compared with non-electronic regulator units, those using the new chip benefit from lower overall component cost, a significant weight reduction leading to reduced transport costs, a compact and robust construction, and a automatic shut-down protection in the event of voltage surges.

For input varying between 155 and 245 ac output regulation is better than 220V ac ± 8 per cent.

Network Electronics, 6th Floor, Middlesex House, 29-45 High Street, Edgware, Middlesex, HA8 7HH. 01-925 6225.

● PROCESSING

Shreds cardboard cartons

DESIGNED for the shredding of erected cardboard cartons, fabricated from kraft-lined corrugated strawboard and inclusive of staples, a new machine will tackle almost any container, provided that one dimension can pass through a feeding width of 600 mm.

The machine is also suitable for the treatment of paper materials where a shred width of approximately 48 mm is acceptable for the purpose of security.

Material which has been processed will be ejected into a preplaced polythene bag of suitable specification. But the unit will shred and compact material to discharge to a waste disposal bag.

Materials for processing are first shredded by contra-rotating and intermeshed tooth-edged blades of extreme hardness and then automatically delivered via an integral storage hopper to a compacting section where a horizontal-acting, hydraulically driven ram compresses the shredded waste against a counter-plate.

Shredding can continue during the compacting action and long strips of material are further acted upon by shearing blades mounted upon the occluding faces of the moving ram and the static storage hopper from the shredding section.

The standard specification includes six rubber-tyred castors which permit the machine to be easily moved, two castors are fitted with braking devices to restrain the unit's movement on a level working surface.

The equipment is supplied ready to work when connected to a suitable 3 phase power supply.

The system eliminates the greatest single daily hazard to the operator: that of hand injuries sustained in breaking up cartons. It is quiet in operation and normal conversations can be held while working on cartons or other paper materials.

Dust emission is minimal on normal paper materials. Where the machine is to be worked in extremely sensitive atmospheric environmental situations, (e.g. computer locations), suitable dust extraction systems can be fitted.

Automatic overload protection devices are provided on the shredding and compacting sections.

Further from EBA System, 29 Broadway, Thatcham, Berks RG13 4HJ. 0635 63208.

● IN THE OFFICE

Easy to expand

STORAGE on a new word processor can be added to over the years to cope with increasing through-put requirements. Launched under the Adler brand name by Office and Electronic Machines, part of the OEM Group, it has been given the name of Adler "Bitsy."

It offers first-time users the opportunity of installing a word processor to deal with requirements at the time of purchase, without the threat of having to purchase a bigger machine at a time when the business has expanded.

Capability of the Bitsy can be extended step-by-step as the company grows, obviating the expensive mistake of having to invest in new units to cope with differing levels of workload.

Office and Electronic Machines, 140, Borough High Street, London SE1. 01-407 3191.

● COMMUNICATION

Versatile intercom

THE SAME kind of stored program ideas that have been applied to modern PABXs (private automatic branch exchanges) can also be built into intercom systems with the aid of the microprocessor.

Facilities for manipulating calls have been available in intercom equipment, but often only with expensive additional hardware.

Recently introduced equipment from Contacta Communications Systems of Pope Road, Bromley, Kent (01-464 7214), manufactured by Intercom (Nottingham) Communications can be supplied with from four to 200 lines and is claimed to be the first UK designed micro-based intercom system.

A particular advantage of the design is that the duplex switching to allow each person to speak separately is only applied when necessary—when loudspeaker operation is taking place. If the speaker at one end is using his handset, normal two way "telephone" speech is possible.

Facsimile system

IMPLEMENTED in the U.S. by ITT is a nationwide dial-up facsimile transmission system which makes use of format/speed translation to allow any make of facsimile machine to "speak" to any other.

It also employs store and forward techniques which offer a number of advantages. For example, a picture is sent, having been converted to a common format for transmission, and then held in a store at a switching site where it can be given priority according to the grade of service paid for and if required be sent to more than one recipient.

Customers do not have to worry about busy lines or whether the recipients are personally present before a message can be sent.

The service is known as Faxpak and at present there are switching centres at New York, Washington DC, Atlanta, Houston, Chicago and Los Angeles, with extensive radial connections from each. Existing common or specialised carriers (Bell for example) are used.

Faxpak is more fully described in the latest edition of Electrical Communication (Vol. 54 No. 3). More data from ITT Domestic Transmission Systems, New York, U.S.

Checks made on calls

LATEST DESIGN of the Tel-Tax telephone management and information system will be introduced by the makers, Systems Reliability, at the IBS show in October.

Basic purpose of such systems is to collect, store and analyse data concerning all incoming, outgoing and internal calls (their length, destination, etc., not their content), so that traffic can be examined with a view to obtaining better efficiency.

The new version of Tel-Tag however, enables this to be done at a distance, and more comprehensively. The unit incorporates a remote scanner which, operating through modems, gives greater scope and flexibility.

It will now be possible to monitor and analyse all data simultaneously (rather than just a selection) and using additional scanners to monitor more than one exchange at the same time. For companies with geographically separated exchanges it will be possible to locate Tel-Tag permanently at head office and gather data on all the exchanges.

More from 24 Rothesay Road, Luton, Beds (0582 38581).

CONTRACTS AND TENDERS

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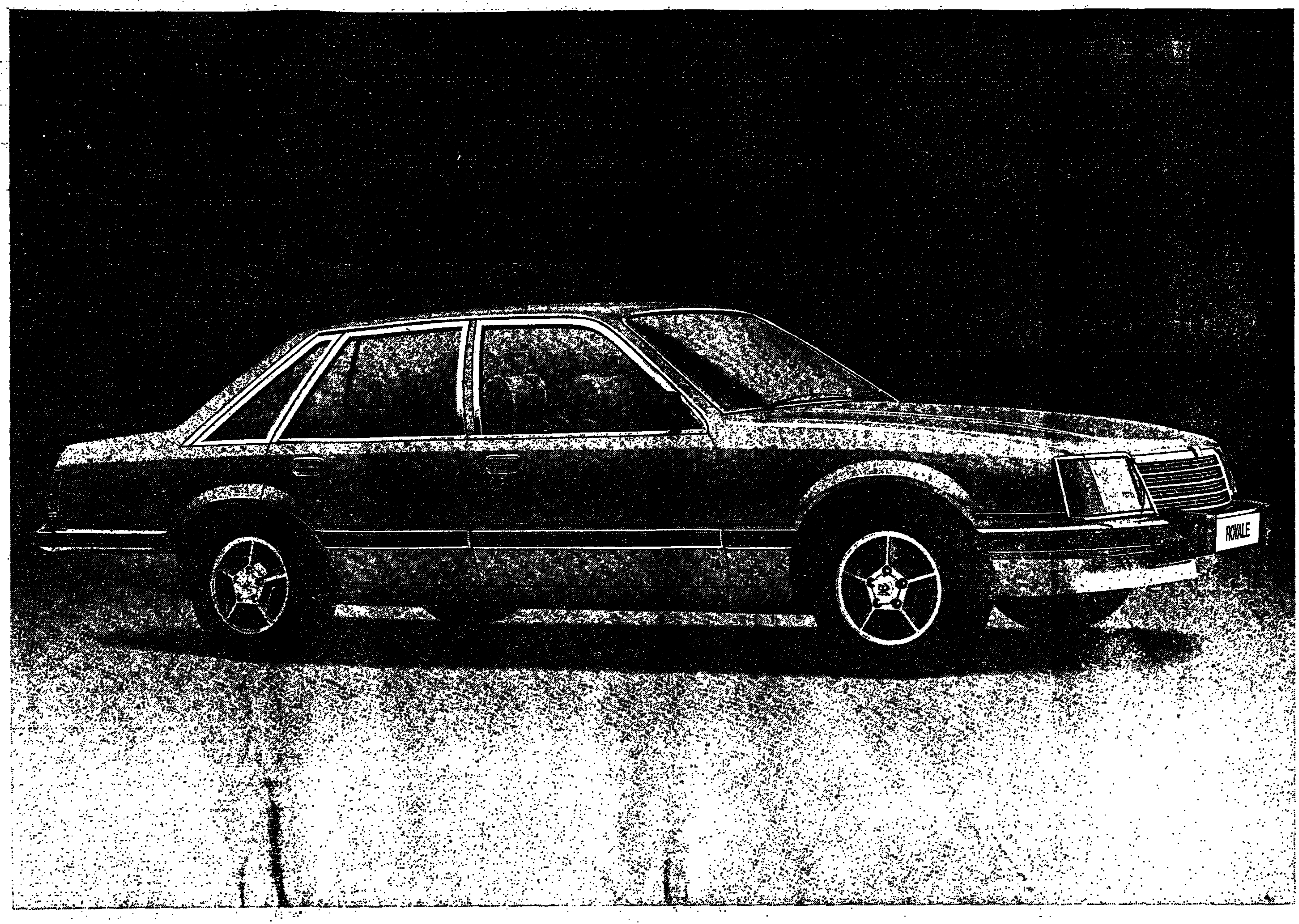

Building and Civil Engineering

£11m Reed and Mallik contract

THE CIVIL engineering division of the Rush and Tompkins group, Reed and Mallik, is to carry out an £11.6m contract to improve the A40 for Gwent County Council.

The section of road involved runs from Skew Bridge, Abergavenny to Raglan, Gwent. Over 12 km of dual two-lane carriageway is called for together with the dualling of 1 km of three-lane road, 5 km of side road works, 19 structures and the excavation of 1m cubic metres of material. The two-year contract is to be started in October.

Other new work includes the £1.42m, 2 km western primary road, Longmeany to Farington link at Leyland for Lancashire County Council, acting as agents for the Central Lancashire Development Corporation: a £2m contract for dualling the existing Whitchurch by-pass for Hampshire County Council and the £3.37m Swaffham by-pass for Norfolk County Council that was reported on this page on August 20.

The company has also won the contract for the £707.000 A39 diversion, Hele Farm to Binhamy at Bude, Cornwall, and several small contracts involving the demolition of a railway bridge, pipework and surfacing which together are worth £200,000.

£5m lightweight concrete plant

A HIGHLY mechanised plant for the manufacture of lightweight concrete products for the construction industry was opened formally last week at Linford, near Stanford-le-Hope, Essex, by Aerated Concrete, a member of the Ready Mixed Concrete Group. It is claimed to be the most up-to-date production unit of its type in Europe.

The plant, which was constructed by Taylor Woodrow and has cost about £5m, will produce blocks, lintels and reinforced roofing, walling, flooring and partition units. These will be marketed under the brand names Durox and Siporex. Production capacity of the plant is 235,000 cubic metres a year.

Aerated Concrete's latest product is what it calls a type C lintel which meets the formal insulation requirements of the Building Regulations.

The inner leaf section is in reinforced aerated concrete, and the external leaf in mild steel which is galvanised after forming. This combination with facing brick, rendered brick or block work in the external leaf and lightweight blocks as the inner leaf, is claimed to have many advantages over other lintel systems.

The lintels are designed to carry a load of 9 kn/m and are in thicknesses of 100 mm and 150 mm, spanning up to 2700 mm clear opening. These components are expected to comply with the new British Standard for lintels which is due to come into effect towards the end of this year.

The company already manufactures two types of aerated concrete lintels: type "A" is designed for use in loadbearing walls and can carry direct loading from timber floors and roofs, while type "B" is for non-loadbearing applications.

The basic raw materials used to form aerated concrete are Portland cement, sand, lime and a trace of aluminium powder. The first three ingredients are ground together after the sand has been through an extensive washing, grading and drying process and water is then added.

Aluminium powder is introduced to the slurry and a chemical reaction begins during which hydrogen bubbles form in the mixture to expand slowly to fill the mould. As the slurry sets, the hydrogen diffuses and is replaced by air which gives the material its thermal insulation characteristic.

When the mass, or cake, as it is called, has hardened sufficiently, a machine cuts it to form blocks or reinforced units. Reinforcing materials used are welded mild steel cages coated with a cement and latex compound. The cut cake is then placed in an autoclave for steam curing at temperatures of 180 degrees C and pressure of 160 lbs per square inch for 15 hours.

The blocks and lintels are then shrink-wrapped to protect them during transport and from excess moisture prior to installation.

£5m awards to Douglas

EXTENSIONS AND alterations at the Central Ordnance Depot, Donnington, Shropshire, are to be carried out by R. M. Douglas under a £3.4m contract from the Property Services Agency. New office blocks, roads, car parks and drainage are also involved.

Douglas has also obtained orders for metal roofing and cladding worth over £1.5m. Included are contracts at British Steel Corporation's Abbey Works, Port Talbot (£400,000), at Milton Keynes for Volkswagen (£400,000) and for advance factories at Gillingham, Kent (£360,000).

Housing in Bradford

FIRST project for Leech Homes (Yorkshire), a newly created division of the William Leech (Builders) group, may be a £1m private housing development near the centre of Bradford.

This division won a design competition for the re-development of the 3.5 acres site in Barkerend Road, about three-quarters of a mile from the city centre and as a result it plans to build about 70 units there, ranging from one-bedroomed flats to three-bedroomed houses at prices ranging from £10,000 to about £20,000.

If the necessary permissions are received work will start early next year.

Over £6m for Norwest Holst

NEXT TO Harrow on the Hill underground station on the outskirts of London, Norwest Holst is to construct a five-storey reinforced concrete framed office block under a £3.3m contract awarded by Grosvenor Square Properties.

Included in the development are eight single-storey shops, a bus station for London Transport and a three-level reinforced concrete car park. Architects are G.M.W. Partnership, the consulting engineers are Pell Frischmann and Partners and the quantity surveyors are V. J. Mendoza and Partners.

This contract worth £3.3m is the largest of several just awarded to Norwest Holst companies.

Marshall-Andrew, which joined the group earlier this year, is to build a Buddhist temple for the Royal Thai Government in Calonne Road, London, SW19 (£457,000) and other awards to this particular company include a £1.2m contract to fit out the ground floor of Pier 5, Heathrow London Airport, a contract from Abal Establishment for a five-storey reinforced concrete building with brick cladding at Westminster Mansions, Great Peter Street, London, SW1, and a £1.1m contract for work at the Royal Masonic Hospital at Ravenscourt Park, London W6.

Newspaper block and school

GLASS-ENCASED, a two-storey block for Bradford and District Newspapers is being built by John Laing at a cost of close on £1.8m.

Work has begun and should be completed by the spring of 1981 on this interesting building, which is being planned around what is expected to represent one of the most advanced newspaper production facilities in the country.

Bradford and District, member of the Westminster Press Group, has opted for a plan which will place the two-storey press hall next to a four-storey ancillary building on a former car park site and adjoining the company's headquarters at Hall Ings, Bradford. These will be renovated and adapted to the new printing complex which will publish the Bradford Telegraph and Argus, Keighley News and Yorkshire Sports.

Press hall facilities will have an in situ reinforced concrete frame, pre-cast concrete roof and floor slabs and curtain wall cladding in tinted glass. They will provide 17,000 square feet of floor space, as will the ancillary building.

Architect is the Robinson Design Partnership of Bradford and consulting engineer J. Robinson and Son (and Associates), also of Bradford.

Down south in Enfield, Laing will start this month on the first phase of a new school which will eventually take 1,050 pupils, including a number of disabled children who now have to travel outside the Borough for their schooling.

The contract for this first stage is valued at £950,000 and it is intended for completion by May, 1981.

Turin School will replace an existing and outdated secondary school.

Up in the north, Laing Scotland is working on a new office development in Glasgow for Rex Stewart and Associates, a Glasgow-based advertising agency.

This contract is worth £433,000 and it covers a five-storey extension to the company's premises to provide 14,530 square feet more space.

Architect is McKay and Forrester and consulting engineer A. M. Sidney and Associates.

Two orders for cooling towers

CONTRACTS worth over £1m have been won by Foster Wheeler Power Products for the design and supply of mechanically-induced-draught cooling towers.

One contract is for a four-cell cooling tower to operate in Calabar, Nigeria. It will form part of a paper manufacturing plant being built for the Nigerian Newsprint Company by Parsons, Whittemore and Lyddon.

The second order is for two three-cell cooling towers for a refinery extension being built at Milford Haven, Wales, for the Texaco/Gulf Pembroke Cracking Consortium, by Snamprogetti.

Wimpey gets mix of operations

LARGEST IN a series of three new contracts to Wimpey, worth £3.1m is the £1.5m award for the construction of 124 dwellings for Leicester City Council.

Heatherbrook II at Bennion Road, Leicester, will be capable of housing more than 500 persons and comprise 32 two- and three-person flats in two-storey blocks, 84 three- and four-bedroom houses, five three-storey five-bedroom houses and three three-bedroom disabled persons' bungalows.

Work has started on the site and is due for completion in June, 1981.

Wimpey has also won two contracts valued in excess of £1m for the construction of library buildings in Sidcup and Bexleyheath, Kent.

At Bexleyheath the work covers erection and completion of Phase 1 of a new library in structural steel encased in concrete.

At Sidcup, work called for is the erection and completion of library accommodation on the ground floor and offices for the Department of Architecture and Civil Design on the first floor. It is mainly of in-situ reinforced concrete with external walls of block and brickwork.

Both contracts are starting and due for completion before the end of 1980.

Livingston Development Corporation has placed a £600,000 contract for the building of a 3,400 sq metre factory and office on its Kirkton Campus.

When completed in about nine months' time, the premises will be occupied by MFE, currently housed in temporary accommodation on the Brucefield South Industrial Estate.

IN BRIEF

● Haden Young has won a £1.3m contract for electrical and mechanical services at the Watling Court, London, EC4, offices development. Main contractor is Higgs and Hill.

● The W. S. Atkins Group has formed a wholly owned subsidiary in the U.S. The new company—W. S. Atkins Inc—has offices in Houston, Texas.

● A £600.000 contract for extending Gamlingay sewage treatment works has been awarded to Biggs Wall and Company by the Anglian Water Authority.

Homes and warehouses

LARGEST OF the latest contracts totalling over £3m awarded to J. Cartwright Construction is for the construction of 117 houses and flats in Boothroyd Lane, Dewsbury. This is worth £1.5m. Another valued at £360.000 is for the erection of 28 dwellings in Liversedge. Both contracts are for the Kirklees Metropolitan Council and are due to commence in October.

Among a number of industrial contracts awarded is one for the construction of three warehouse units for Slough Estates on the Monckton Road Industrial Estate and valued at £480,000. For English Industrial Estates Corporation the company is to carry out works at a factory on the Langthwaite Grange Industrial Estate at South Kirkby at a cost of about £360.000.

In Roundhay Road, Leeds, work is under way on warehouse and offices for Austin Wholesale (Leeds) (£175,000) and also in Yorkshire the company has begun work on a £300,000 project to provide three warehouse units on the Grangefield Industrial Estate. This is an expansion of a development recently carried out by J. Cartwright Developments.

£1½m worth to Cubitts

A MEDICAL and dental centre, church, car park and parade ground for the Royal Marines CTC at Lympstone, near Exmouth, Devon, is to be built by Cubitts under a Property Services Agency contract worth £634,000.

At Stockland Green, Birmingham, Cubitts is to convert the former Plaza Cinema to a supermarket for the Lennons Group under a £385,500 contract. The work includes demolition, before providing new floors on two levels, a two-storey extension and major refurbishment throughout the building. Architects are Gwilliam and Armstrong.

In Nuneaton, Cubitts is to build five shop units for Dean Property (Midlands). The contract for the two-storey units, which will form an infill between existing buildings in Queens Road, is valued at £285.000. Robert Merrick Partnership are the architects.

Further north, Cubitts has received a contract for work at the South of Scotland Electricity Board computer centre at Cathcart, Glasgow. Ten years ago, the company was called in to construct a computer and office building and this was followed last year by a new computer centre. Now Cubitts is to build a foyer and tunnel to link the two office blocks under a contract worth £225,000.

Will resist onslaught of vandals

AS PEOPLE who live or work in high rise blocks know so well vandalism of lifts is an ever-present problem and even danger.

Hammond and Champness has now developed a new range of lifts designed to withstand the many types of assault likely to occur on local authority housing estates, multi-storey car parks and other public service buildings.

The latest lifts have epoxy resin floors, bronze cills and patterned stainless steel for the entrances and parts of the lift itself. The lighting fitting in the lift has a polycarbonate panel and a metal grid while the push buttons are of a type that cannot easily be damaged.

The company says this Borough range of lifts can be supplied with a variety of load capacities and speeds and full details can be obtained from its headquarters at 159-173 St. John Street, London EC1V 4JQ. (01-253 4818).

Designed to speed data

A SYSTEM called the "Design Centre" has been developed specifically for the construction industry by Genesys (wholly owned subsidiary of the National Research Development Corporation), Lisle Street, Loughborough, Leicestershire (0509 39 185).

It is a dedicated small machine with disc subsystem, printer and visual display unit with a keyboard input.

This complete package of software and hardware is free-standing and works independently — the operator is in charge of the single-user system which is not an outpost or time-sharer.

It is thus possible, says Genesys, for the smaller user of computer aided design to have his own private unit in his office, thus avoiding long turnaround times or queuing on a shared machine.

While meeting the demands of engineers and designers it is also easy for use by those of the fraternity who do not have a detailed knowledge of computers or computing.

Major areas covered by the Genesys software library are: building design, structural analysis, highways and bridge design, fluid distribution, geotechnical analysis, and construction management.

CONTRACTS AND TENDERS

NTPC National Thermal Power Corporation Ltd.

INVITATION TO BID FOR POWER PLANT EQUIPMENT
FARAKKA SUPER THERMAL POWER PROJECT

Proposals are invited by the National Thermal Power Corporation Ltd., for the first phase of their Farakka Project consisting of 3 x 200 MW units at Farakka, District Murshidabad, West Bengal, India for furnishing and erection of the following equipment packages.

(i) Specification No. CC-42-001
3 Nos. — Turbine Generators and Auxiliaries including Feed Plant with 3 Boiler Feed Pumps per set and Isolated Phase Bus-duct and
2 Nos. — 115/25 Tonnes Turbine Hall Overhead Cranes.

(ii) Specification No. CC-42-002
3 Nos. — Steam Generator and Auxiliaries including H.P. piping, Electrostatic Precipitators and Elevators;
1 No. — Auxiliary Steam Generator with Auxiliaries and
1 No. — 50 Tonnes Horizontal Boom Tower Crane.

The proposal will be received at the address given below, up to 1030 hrs. (IST) on 13th Dec. 1979 and opened on the same day at 1100 hrs. (IST).

NTPC have applied through Government of India for a credit from International Development Association and intends to apply the proceeds of this credit towards CIF/EX-works value of equipment portion of the Contract. Participation would be limited to Bidders from member countries of IBRD and Switzerland, and the equipment, materials and services proposed shall have their source of origin in member countries of IBRD and Switzerland.

Bidders who have designed, manufactured and installed at least three sets of equipment of the type specified for coal based 200MW and above capacity units which are in successful commercial operation for at least two years will be eligible to participate. However, those who have manufactured and installed three or more sets of equipment of the type specified for 100 MW and above capacity coal based units which are in successful commercial operation for a period not less than 2 years would also be eligible, provided they are already manufacturing equipments for 200 MW units in collaboration with manufacturers of international repute.

The Bidders will be required to furnish a Bid Guarantee alongwith their bid and Contract Performance Guarantee on award of Contract for amounts of 2% and 10% respectively.

Copies of the bid documents will be available at the office of NTPC at the address given herein between 1000 hrs. and 1500 hrs from 14th Sept.'79 to 10th Nov.'79 for inspection and examination by the interested bidders. Copies of the bid documents can be had between the dates above mentioned on payment of specified amount either by certified cheque or by crossed Demand Draft payable to National Thermal Power Corporation Limited, New Delhi.

Sl. No.	Description	Bid Documents	Price Rs.	Price US $
1.	Both Equipment Packages	One copy each of Vol. I, IA, IB, & IIA, IIB.	2500	300
2.	Turbine Generator Package	One copy each of Vol. I, IA & IIA.	1500	180
3.	Steam Generator Package	One copy each of Vol. I, IB & IIB.	1500	180

Volume-I consists of General Conditions of Contract, Commercial proposal sheets etc. Volume IA/IB consist of technical data requirements and Volume IIA & IIB the technical specifications of the Turbine Generator & Steam Generator respectively.

Additional individual volumes can be obtained on payment of US Dollars 60 or Indian Rupees 500 per Volume per copy.

The prospective bidders may choose to bid for both the packages or for individual package, however, they will not be permitted to make offer for part of the equipment covered in a particular package.

Contract Services,
National Thermal Power Corporation Ltd.
Corporate Office, NTPC Square,
62-69, Nehru Place,
New Delhi-110019 (INDIA)
Telex : ND 2266

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LOMBARD

Indexation and oil prices

BY SAMUEL BRITTAN

SHOULD ONE add the oil price increase to the world inflation rate that would otherwise be expected, and add on another couple of per cent for good luck to take account of wage earners trying to compensate for the rise in the cost of living? "Yes," say the IMF, the OECD and most orthodox forecasting models such as the British Treasury's. "No," say GATT, the British Chief Secretary Mr. John Biffen joined, with varying degrees of conviction, by the different schools of monetarists. An increase in the price of one commodity can only lead to a faster rate of inflation if Governments respond with the wrong monetary policies.

Basically the GATT school is right. The problem, however, is in sticking to an intended monetary policy despite various shocks that make the task more difficult But there is no good reason why the oil price adjustments should constitute one of these shocks. The problem arises because of OPEC countries' unfortunate habit of pricing oil in dollars, which the U.S. Administration quite mistakenly presses them to continue.

The major increase in the real price of oil took place in 1973-74. Since then the various so-called increases have mainly been a series of jerky moves to compensate for world inflation in general and the depreciation of the dollar in particular. The real price of oil, that is, the price relative to manufactured goods or other commodities, has moved in a saw-shaped way, rising abruptly whenever the posted dollar price increases and then falling gradually away as the dollar appreciates and world inflation continues.

This creates the maximum uncertainty and disturbance for all concerned. OPEC countries fear that they are being cheated in the intervals between the price changes. When the jumps occur, alarmists and doom-mongers in the West are given a new lease of life; and to the extent that wage settlements are influenced by cost-of-living fears, workers are priced out of jobs. This encourages Governments to pursue inflationary policies and prepares the ground for the next jump in the nominal oil price.

There would be less need for such shocks if the oil price were fixed in terms of a currency basket. IMF Special Drawing Rights have been suggested for the purpose: but OPEC members naturally prefer the currency basket they have designed themselves. No matter what basket is used, the price of oil would not be eroded by dollar depreciation, and it would no longer be necessary to jerk up the price as an offset.

As payments have to be made in actual currencies, rather than baskets, and the dollar still seems most convenient for the purpose, a dollar price would still be posted. But it would change from week to week or *month to month according to* an automatic formula with no need for agonised meetings and diplomatic crises. The automatic link between the dollar exchange rate and the price of U.S. oil imports would also have the salutory effect of demonstrating to Americans in clear and unmistakable fashion the link between the external and internal value of the dollar, which too many U.S. economists are inclined to minimise.

No currency basket formula could prevent disruption occurring as a result of events such as the shrinking of Iran's exports following the Shah's overthrow. But representatives of OPEC countries insist that the new price structure which resulted was a political decision and below what the market would bear. Indeed it is claimed that some marginal production is taking place at a loss. In deciding what new price was reasonable to charge the main influence was the movement of the dollar and of world inflation. Had previous price increases been eroded less, the upward jerk this spring would have been correspondingly smaller. No doubt there will be fresh periods of oil surplus and cartel restrictions again required to keep up prices. But a currency basket formula would still provide a more stable basis for price and product policy *than the present dollar link.*

The currency basket formula would protect OPEC countries *against dollar depreciation,* but not against inflation as such. Should the oil price not only be expressed in basket form, but tied to a world inflation index? The problem is that it is quite impossible to guarantee for all time the real price of oil or any commodity. The attempt by interested groups to prevent all downward movements in relative wages or prices (but not upward ones, of course) is the root cause of the malaise of the world economy.

Ideally indexation should be used to provide a standard of value in a world of shrinking currencies. In other words it should be a way of expressing prices, not guaranteeing them. Thus if the present real price of oil is taken as 100, it might be 90 or 110 in 18 months' time. But it could be adjusted gradually in line with economic and political forces and there would be no need for sudden movements merely to offset inflation.

As a practical compromise, I would suggest that OPEC should publish and publicise an index of real oil prices, but make automatic adjustments to offset currency movements only. This might help loss of face at times when real price declines are required. And please don't tell me that ending world inflation would be *simpler.*

The problems of putting a jury on trial

THE DISCLOSURE in The Guardian last Thursday of a list showing the results of jury-vetting carried out by the police evoked a veritable judicial furore. The paper revealed that 93 potential jurors had been vetted without their knowledge before the Old Bailey trial of six so-called *anarchists on robbery charges.*

Judge King-Hamilton, QC, described the newspaper's conduct as "outrageous" and threatened contempt proceedings by referring the issue to the Director of Public Prosecutions.

The courts and the Press always have an uneasy relationship. Occasionally the law flexes its muscles when it thinks that the administration of justice is being polluted by Press revelations. But rarely has there been such a headlong clash, with both sides retiring to their corners awaiting the next round. How did this confrontation arise?

Trial by jury is a hallowed institution in the English criminal justice system. The jurors who are summoned to attend court, and from among whom 12 will be selected to try any one case, are known as the panel. The summoning officer, who acts under the court administrator, is expected to make a disinterested selection of persons to be summoned. Although a proper system of uniform and mechanical selection of names should be established, the matter of how to compile the list is left largely to the discretion of the summoning officer. Practice varies considerably from court to court, but most try to achieve a random selection.

The names of jurors who have been summoned and not found to be ineligible, disqualified or excused from jury service are set out in lists returned to the court. Panels vary slightly in form, but it is normal for each juror to be given a number. The juror's name (in full) and address (either in full or simply by general area) are included. The juror's occupation used to be given, but Lord Hailsham, when he was Lord Chancellor in the Heath administration, ordered that jurors' occupations should be omitted. A party to proceedings in which jurors may be called on to try a case is entitled to reasonable facilities for inspecting the panel from which jurors will be drawn.

The paucity of information about potential jurors means that when the accused comes to decide how to exercise his right to challenge he has little to go on. If the address is given, there is the opportunity for making an improper approach to the juror. Interviewing a juror in advance to discover even his attitude to social problems is probably a contempt of court. This factor had much to do with the introduction in 1967 of majority verdicts. It might be possible to bribe one or two jurors on a panel, but hardly possible to ensure a vote from more than two.

Most accused in the past have not bothered to inspect the panel, but used the right to challenge those jurors whom they thought on sight in the courtroom to be possibly prejudiced, for instance, on class or age grounds. (It has been common practice in pornography trials for accused to try to obtain a young jury.)

THE WEEK IN THE COURTS

BY JUSTINIAN

Until very recently, the accused had the right to challenge up to seven jurors peremptorily without giving any reasons. It was then possible to influence the question of who tried the case, particularly when the trial was of a number of accused each with a separate right of seven challenges. But the Criminal Law Act 1977 reduced the number to three challenges. No doubt this further limitation of the accused's right of challenge has exacerbated the current row.

The prosecution does not have the same right. Instead, it may ask a juror to "stand by" until all the others on the jury panel have been called. This is as good as a right to challenge peremptorily, except where there are not enough other jurors available. After an accused has challeneged three jurors he may not ask other jurors to "stand by," so that his rights are, in effect, more limited than those of the prosecution.

Over the years, prosecuting counsel have occasionally exercised the right of "stand by," based upon information received from the police about potential jurors. A common example was in a case some years ago involving an affray in Ilford High Street when the prosecutor "stood by" any juror who came from East London, for fear that he or she might be prejudiced one way or another.

Police resources are such that prosecutors can obtain information that may lead them to exercise their right of "stand by," without disclosing reasons. Viscount Dilhorne once revealed that when he was Attorney-General he ordered the jury panel be checked for known Communists, so that they should not serve on a jury in the trial of George Blake, the Soviet spy who in 1961 was sentenced to 42 years' imprisonment. The search produced one active member of the Communist Party who was asked by the Crown to stand down. It was because the implications of this activity by the authorities were sinister that Mr. Sam Silkin QC, when Attorney General, last year made public the guidelines laid down in 1974 for the vetting of jurors, and also revealed the number of instances when vetting has taken place.

While there are few instances where the Crown has engaged in vetting, it is not surprising that even a controlled system has fallen foul of libertarian criticism.

It is only a century and a half since the Crown was regularly accused of packing juries with sympathisers in political prosecutions. It was also the manifest unfairness that the Crown should be able to call on its vast resources of police and other knowledge in deciding who to keep off the jury in any politically sensitive trial that led Judge Brian Gibbens QC in the present case to order that what was sauce for the goose was sauce for the gander. The defence could vet equally with the prosecution. That seemed eminently sensible, until the court administrator became alarmed at the inordinate cost to the legal aid fund of reimbursing solicitors for doing the same as the police. The compromise was reached for the prosecution to hand over confidentially to the defence such material as it thought appropriate.

That confidentiality was breached by someone handing over the information to The Guardian, which published the results of the police vetting. It was indicated that 19 jurors had some black mark against them. Round One went to the newspapers, because the jury panel of 93 had to be discharged. The trial is to begin this week with a jury drawn from a fresh panel. Whether that jury has also been vetted remains to be seen. Since the Crown needs only ten out of 12 jurors to bring in a verdict of guilty, one might have expected the authorities to forego vetting in a case that has only marginally any political connotations.

But even if that sensible course is taken, the whole problem of selecting jurors requires urgent examination. Should our system adhere to the basic principle of random selection and disfavour, even exceptionally, any vetting? Or ought we to recognise that, in modern conditions, both prosecution and accused persons alike ought to be furnished with an opportunity to find out the antecedents and attitudes of potenial jurors to avoid inherent bias and prejudice? The latter system will bring us dangerously close to the American system in which trial by jury begins with the jury on trial.

Final Straw is the best so far

RACING

BY DARE WIGAN

THE CLEAR-CUT victory of Lord Seymour in the Mill Reef Stakes at Newbury on Saturday underlined once again the claims of his stable-companion, Final Straw, to be regarded as the best two-year-old colt of this season so far.

This is not to say that the important races for animals of this age group to be run at Ascot and Newmarket during the next few weeks will not reveal one or more exciting newcomers.

Final Straw will be racing again in the William Hill Dewhurst Stakes at Newmarket on October 19. Meanwhile, he has beaten all those who had been hailed as embryo champions.

Today there are flat race meetings at Bath, Leicester and Hamilton. At Bath, Willie Carson will be hoping to narrow the gap that separates him from Joe Mercer at the top of the jockeys' championship table.

It is likely that he will have a winner or two from Aidanjanes, Cavalry Cut and Prince Of Sheba, all of whom he rides for his own stable. But for the best bet at Bath I suggest Heaven Chosen in the Langridge Handicap (3.30).

This filly by High Top, out of the good race mare, Cursorial, finished last of six on *her only appearance this season,* at Sandown on September 15. But she was in fact only about seven lengths behind the winner, Red Refus, and it is improbable that she will have anything of his calibre to compete against this afternoon.

At Leicester, Shred, who lost by a head to Star Flare at Bath at the end of last month, appears to be reasonably weighted with 8 st 6 lbs in the Leicestershire Nursery Handicap (3.15). Bearing in mind that Star Flare, on her next appearance, came within a neck of upsetting Highland Light at Sandown.

Greats, who defeated Concert Hall here in June, and who has since won a competitive event at Brighton, is the probable winner of the St. Margarets Handicap (4.15). And Blazing Sun, badly drawn when gambled on at Wolverhampton last month, will go well in the Filbert Fillies Stakes (4.45)

Annathena, who has shown a liking for Hamilton on more than one occasion, may have to perform no better than when she beat Regency Elite over the distance here three weeks ago to win the Wylie's Ltd. *Handicap (3.15).*

BATH
2.30—Aidanjanes
3.00—Cavalry Cut
3.30—Heaven Chosen***
4.00—Prince Of Sheba
4.30—Taj Almidan

LEICESTER
3.15—Shred*
4.15—Greats**
4.45—Blazing Sun

HAMILTON
2.15—Honey Barrel
2.45—Sharp Point
3.15—Annathena
3.45—Double High

Charing Cross river bridge

THE HUNGERFORD bridge over the Thames, used by 400 trains bringing 24,000 passengers into Charing Cross station every day—and closed for major repairs since May 14—will re-open next Monday, October 1.

All of the station's suburban services have been affected to some extent by the £3m operation on the six-span bridge.

New hospital for Borders

BUILDING IS expected to begin in 18 months on an £11.5m general hospital for the Scottish Borders. Mr. Russell Fairgrieve, Parliamentary Under Secretary of State for Scotland, said the first patients should be accepted by 1985, four years earlier than originally planned.

TV/Radio

÷ Indicates programme in black and white

BBC 1

6.40-7.55 am Open University (Ultra high frequency only). 9.00 For Schools, Colleges. 11.25 You and Me. 11.40 For Schools, Colleges. 12.45 pm News. 1.00 Pebble Mill at One. 1.45 Trumpton. 2.01 For Schools, Colleges. 3.15 Songs of Praise. 3.53 Regional News for England (except London). 3.55 Play School (as BBC-2 11.00 am). 4.20 The Clever Girl. 4.35 Battle of the Planets. 5.00 John Craven's Newsround. 5.05 Blue Peter. 5.35 Noah and Nelly.

5.40 News.
5.55 Nationwide (London and South East only).
6.20 Nationwide.
6.55 Angels.
7.20 The Rockford Files.
8.10 Panorama.
9.00 News.
9.25 The Monday Film: "Ulzana's Raid," starring Burt Lancaster.
11.05 Film 79.
11.35 News Headlines.
11.37 Report on Kielder—Europe's biggest man-lake.
12.05 am Weather/Regional News.

All Regions as BBC-1 except at the following times:—

Scotland—11.00-11.20 am For Schools. 5.55-6.20 Reporting Scotland.

Wales—10.38-10.58 am I Ysgolion. 1.45-2.00 pm Pili Pala. 5.55-6.20 Wales Today. 6.55 Heddiw. 7.15 Angels. 7.40-8.10 Where Are They Now? 12.05 am News and Weather for Wales.

Northern Ireland—3.53-3.55 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 12.05 am News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds, Manchester, Newcastle); Midlands Today (Birmingham); Points West (Bristol); South Today (Southampton); Spotlight South West (Plymouth).

BBC 2

6.40-7.55 am Open University.
11.00 Play School.
2.15 pm Let's Use Let's Go (Film report on series for the handicapped).
4.50 Open University.
6.55 Time Out of Mind.
7.20 Tex Avery cartoons.
7.30 Mid-Evening News (including sub-titles.)
7.40 A Diary of Britain.
8.20 The Two Ronnies.
9.00 Alec Guinness in "Tinker, Tailor, Soldier, Spy."
9.50 Horizon.
10.40 Madeline Bell with her choice of music.
11.15 Late News on 2.
11.30 Closedown reading.

CHANNEL

Channel is the only IBA company transmitting programmes during the present industrial dispute. Details of this local service are given below.

1.20-1.30 pm Channel Lunchtime News and What's on Where. 5.00 Woody Woodpecker. 5.30 Beverly Hillbillies. 6.00 Report at Six Extra. 7.00 Columbo. 8.20 Feature Film: "Evil Roy Slade." 10.05 Channel Late News. 10.10 Then Came Bronson. 11.05 News in French.

RADIO 1

(S) Stereophonic broadcast
‡Medium Wave

5.00 am As Radio 2. 6.00 Dave Lee Travis. 9.00 Simon Bates. 11.31 Paul Burnett. 2.0 pm Andy Peebles. 4.31 Kid Jensen. 7.00 Stayin' Alive. 8.00 Mike Read. 9.50 Newsbeat. 10.00 John Peel (S). 12.00-5.00 am As Radio 2.

RADIO 2

5.00 am News Summary. 5.03 Tony Brandon (S). 7.32 Terry Wogan (S). 10.03 Jimmy Young (S). 12.15 pm Waggoners' Walk. 12.30 Pete Murray's Open House (S). 2.15 David Hamilton (S). 4.15 Much More Music (S). 5.05 Waggoners' Walk. 5.20 John Dunn (S). 6.45 Sports Desk. 7.02 Music from the Movies (S). 7.30 Alan Dell with The Dance Band Days and at 8.02 The Big Band Sound (S). 9.02 Humphrey Lyttelton with The Best of Jazz on records (S). 9.55 Sports Desk. 10.02 Town and Country Quiz. 10.30 Star Sound. 11.02 Brian Matthew with Round Midnight, including 12.00 News. 2.02-5.0 am You and the Night and the Music with Patrick Lunt (S).

RADIO 3

‡6.55 am Weather. 7.00 News. 7.05 Overtures, Concert, part 1 (S). 8.00 News. 8.05 Concert, part 2. 9.00 News. 9.05 This Week's Composer: Edmund Rubbra (S). 9.50 Lindsay String Quartet Concert, part 1 (S). 10.35 Interval Reading. 10.40 Concert, part 2. 11.25 BBC Northern Singers (S). 12.10 pm Schubert Piano Sonatas (S). 1.00 News. 1.05 BBC Welsh Symphony Orchestra (S). 2.15 Music for Organ (S). 2.45 Matinee Musicale (S). 3.45 New Records (S). 5.25 Homeward Bound including 5.45-5.5 News (‡ and mono only from 5.45). ‡6.15 At Home. 7.10 "Gurrelieder," Schoenberg's cantata, part 1 (S). 8.15 Changing Qualities of Chinese Life. 8.35 "Gurrelieder," part 2 (S). 9.20 Decaying Splendours. 9.45 Viennese Dance Music (S). 10.00 "Dr Piffoel," by George Sand (S). 10.40 Music for Violin (S). 11.25 EBU Jazz Concert (S). 11.55-12.00 News.

VHF Only—6.00-7.00 am and 5.45-7.10 pm Open University.

RADIO 4

6.00 am News Briefing. 6.10 Farming Week. 6.25 Shipping forecast. 6.30 Today, including 6.45 Prayer for the Day. 7.00, 8.00 Today's News. 7.30, 8.30 News headlines. 7.45 Thought for the Day. 8.45 Diary of a Somebody (6). 9.00 News. 9.05 Start the Week with Richard Baker. 10.00 News. 10.05 Wildlife. 10.30 Daily Service. 10.45 Morning Story. 11.00 Oil Slick at Ixtoc (report). 11.45 Listen with Mother. 12.00 News. 12.02 pm You and Yours. 12.27 Top of the Form. 12.55 Weather; programme news. 1.00 The World at One. 1.40 The Archers. 1.55 Shipping forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.05 Afternoon Theatre (S). 4.35 Story Time: "All Done from Memory" by Osbert Lancaster. 5.00 PM News magazine. 5.50 Shipping forecast. 5.55 Weather; programme news. 6.00 News. 6.30 The Small, Intricate Life of Gerald C. Potter. 7.00 News. 7.05 The Archers. 7.20 "The Girl Who Came to Supper" (musical) (S). 9.15 Kilvert in Season. 9.30 Kaleidoscope: Prix Italia. 9.59 Weather. 10.00 The World Tonight: News. 10.30 The News Quiz (S). 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Music at Night (S). 12.00 News.

BBC Radio London

5.00 am As Radio 2. 6.30 Rush Hour. 10.03 The Robbie Vincent Telephone Programme. 1.03 pm London Live. 3.03 Paul Owens' Showcase. 4.30 London News Desk. 5.35 Look, Stop, Listen. 7.03 Black Londoners. 8.00 Turn Up The Volume: "Julius Caesar" for English Literature students. 9.00-5.00 am Join Radio 2.

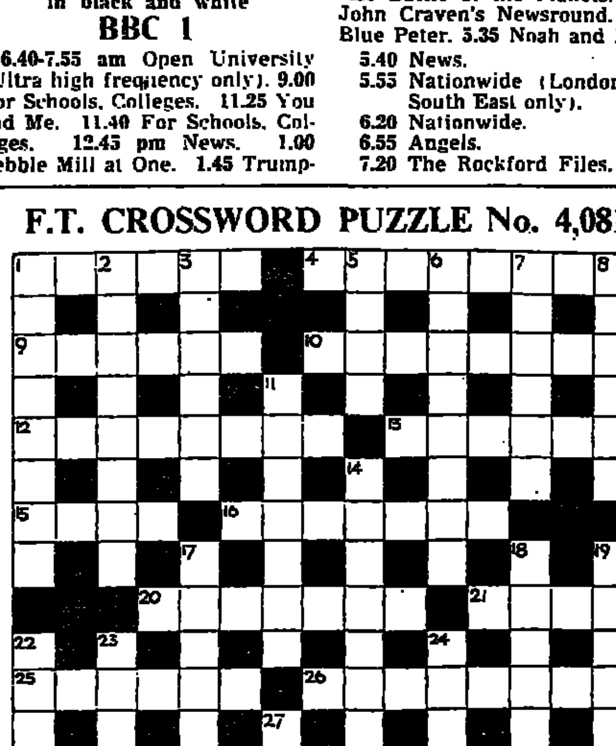
London Broadcasting

6.00 am AM with Bob Holness and Doug Cameron. 10.00 The Brian Hayes Show with guest Tony Benn. 1.00 pm LBC Reports with Max Miller and Alan Clark. 3.00 George Gale's 3 O'clock Call. 4.00 LBC Reports with Paul Ingrams and Alan Clark. 8.00 After Eight Special: David Loyn on The Pope's Visit to Ireland. 9.00 Nightline with Jenny Lacey. 12.00 LBC Reports Midnight. 1.00 am Night Extra with Tara Jefferies. 4.00 Monty at Large. 5.00 Morning Music.

Capital Radio

6.0 am Breakfast Show with Mike Smith (S). 9.00 Michael Aspel (S). 12.00 Dave Cash (S). 3.00 pm Roger Scott (S). 7.00 London Today (S). 7.30 Open Line with Ric Davis (S). 9.00 Nicky Horne's Your Mother Wouldn't Like It. 11.00 Tony Myatt's Late Show. 2.00 am Night Flight (S).

F.T. CROSSWORD PUZZLE No. 4,081



ACROSS

1 Get Bob to admit it's pale (6)
4 Sheriff's officer has a hint for the employees (8)
9 It's thoughtlessness to collect round it (6)
10 Be prominent in resistance (5, 3)
12 Fastened Edward about that place (8)
13 A broken finger gives one the edge (6)
15 Find fault with the fish (4)
16 A match for Satan (7)
20 Priest joins the Irish in defeat (7)
21 Note from a child (4)
25 Not made by stone walls, the poet said (6)
26 Write a trite phrase on the War Department (8)
28 A pointed reform of one who lives down under (8)
29 Arrived with the artist to take a picture (6)
30 Gaiety? You need it in term time (8)
31 Made up for prevailing character in this period (6)

DOWN

1 Solar position upsets the solecist (8)
2 Convenience for a party after a volcanic outburst (8)
3 Start with the unfashionable crowd (6)
5 A letter from Greece finds a number expressing thanks (4)
6 Oddments caused by solar desiccation (8)
7 "— thee, witch," the rump-fed ronyon cries" (Macbeth) (6)
8 Mechanic is in better health (6)
11 Forensic lord indeed misled (7)
14 Church for a man about the North (7)
17 Out of sorts but welcomed by the golfer (5, 3)
18 There is vexation, we hear, in leather (8)
19 Criterion as a rallying-point (8)
22 Siphoned ostentation (6)
23 Falstaff's follower armed himself (6)
24 "For honour travels in a — so narrow" (T. and C.) (6)
27 An opening for 500 in the island (4)

The solution of last Saturday's prize crossword will be published with names of winners next Saturday.

ENTERTAINMENT GUIDE

OPERA & BALLET

COLISEUM. Credit cards. 240 5258. Reservations 836 3161. ENGLISH NATIONAL OPERA. Tomor. & Fri. 7.30: La Traviata. Wed. & Sat. 7.00: Aida. Thurs. 7.30: La Cenerentola. 104 balcony seats avail. from 10 am on day of perf.

COVENT GARDEN. CC. 240 1066 (Gardenchange Credit cards 836 6903). THE ROYAL OPERA. 1979-80 Season commences Oct. 1 at 7.30 with World Premiere of John Taverner's THERESE. THE ROYAL BALLET. Oct. 3 at 7.30 ROMEO & JULIET.

SADLER'S WELLS THEATRE. Rosebery Ave., EC1. 837 1672. Until Oct. 6. Evgs. 7.30. Mats. Sats. 2.30. PACO PENA'S FLAMENCO COMPANY. "A blaze of Spanish sunshine." E. News.

THEATRES

ADELPHI THEATRE. 01-836 7611. Evenings at 7.30. Mats. Thurs. at 3.00 and Sat. 4.00. JOHN INMAN in "GLORIOUS FARCE." Daily Telegraph. CHARLEY'S AUNT. LAST WEEK—Ends Saturday.

ADELPHI. CC. S. 01-836 7611. A SUMPTUOUS NEW PRODUCTION OF MY FAIR LADY. OPENING OCT. 25 at 7.00. Subs. Evgs. 7.30. Sats. 4.00 and 7.45. Mats. Thursdays at 3.00. TONY BRITTON, LIZ ROBERTSON, PETER BAYLISS and ANNA NEAGLE in THE WORLD'S GREATEST MUSICAL MY FAIR LADY. Reduced price previews OCTOBER 19 to 24. Book Now Adelphi Theatre and Agents. Credit card and party bookings 836 7611.

ALBERY. From 8.30 am incl. Suns. 836 3878. CC bookings 836 1071-3. Evgs. 7.45. Thurs. and Sat. 4.30 and 8.00. A THOUSAND TIMES WELCOME IS LIONEL BART'S OLIVER. "MIRACULOUS MUSICAL." Financial Times. With GEORGE LAYTON, HELEN SHAPIRO, MARGARET BURTON. Party rates and student stand-by avail.

ALDWYCH. CC. 836 6404. Info 836 5332. Fully air conditioned. ROYAL SHAKESPEARE COMPANY in repertoire. Ton't, tomor. 7.30. Wed. 2.00 & 7.30. LOVE'S LABOUR'S LOST. "As perfect as anything can be this side of heaven." Gdn. "The evening offers nothing but enchantment." S. Express. With Moss Hart and George S. Kaufman's comedy ONCE IN A LIFETIME (next perf 27 Sept.). Now bkg. Gorky's CHILDREN OF THE SUN (low price prevs from 3 Oct). RSC also at THE WAREHOUSE (See under W).

AMBASSADORS. CC. 01-836 1171. Evs. 8.00. Fri. and Sat. 5.30 and 8.30. DINSDALE LANDEN, GWEN WATFORD, DAVID BURKE, ANGELA DOWN in BODIES by James Saunders. "IT'S IMPACT HIT ME LIKE A THUNDERBOLT FROM JOVE. THE LANGUAGE BLAZES WITH WIT AND INTELLIGENCE AND ITS THEME ELECTRIFIES." Daily Mail. BODIES. "WHEN WE HAVE LAUGHED AT ITS WIT, BEEN HELD IN THE GRIP OF ITS DRAMA AND REVELLED IN THE COLOUR AND LAYERS OF ITS LANGUAGE, BODIES STILL RAISES ECHO AFTER ECHO IN OUR MINDS AND HEARTS. DINSDALE LANDEN'S PERFORMANCE IS WORTH GOING MILES TO SEE." Bernard Levin. BODIES. "MR. LANDEN GIVES WHAT I INSIST IS THE BEST PERFORMANCE IN A MODERN PLAY NOW TO BE SEEN IN LONDON." E. News.

APOLLO THEATRE. CC. 01-437 2663. Evgs. 8.0. Sat. 5.0 and 8.0. Mat. Th. 3.0. IAN LAVENDER, TERENCE EDMUND, JULIA FOSTER in HAPPY BIRTHDAY. A VERY FUNNY NEW COMEDY BY THE AUTHORS OF BOEING BOEING. "FEYDEAU LIVES CA VA" Gdn. "IT WILL PROBABLY RUN AND RUN." Daily Mail.

ARTS THEATRE. 01-836 2132. TOM STOPPARD'S DIRTY LINEN. "Hilarious . . . do see it." Sun. Times. Monday to Thursday 8.30. Friday and Saturday 7.00 and 9.15. NOW IN ITS FOURTH YEAR. Lowest-priced best seats in London £4.00, £3.35, £1.60 plus 15p temp. members.

BOULEVARD TH. at the Raymond Revue Bar, Walkers Ct., Brewer St. CC. Tel. 01-437 2661. Paul Raymond presents Queen of America's Sex Films MARILYN CHAMBERS. Exclusive British Appearance LIVE ON STAGE. Plus Banned by the Censor, the Hottest look at sexual permissiveness ever! Twice nightly Mon.-Sat. 8 and 10 pm.

CAMBRIDGE. 01-836 6056. CC. 01-836 7040. Mon. to Fri. 8.00. Thurs. 3.00. Sat. 5.00 and 8.30. THE HIT BROADWAY MUSICAL GREAT FAMILY ENTERTAINMENT CHICAGO. "A TRIUMPH." Gdn. "A HIT." People. CHICAGO. "THERE HASN'T BEEN A MUSICAL IN LONDON FOR A LONG TIME THAT COMES WITHIN A MILE OF IT." FT. CHICAGO. "THE BRIGHTEST, BOUNCIEST MUSICAL COMEDY IN TOWN." NoW. CHICAGO. "WILL BE DELIGHTING LONDON FOR A LONG TIME." Evening Standard. CHICAGO. "AN UNDOUBTED SUCCESS." D. Tel. CHICAGO. "ALL RAZZLE DAZZLE." E. News. "WIT AND STYLE." Daily Express. CHICAGO. "THERE IS NO COMPARABLE MUSICAL IN LONDON TODAY." S. Telegraph. CHICAGO. "A SUPER EVENING'S ENTERTAINMENT." Sunday Express. CHICAGO. "THOUSAND WELCOMES . . . IT WOULD BE A CRIME TO MISS IT." Daily Mirror. Reduced prices for Groups 01-836 6056 and 01-437 3856. Student nurses, OAPs standy £1.50.

COMEDY THEATRE. CC. 01-930 2578. Mon.-Sat. 9.00. Mats. Fri. & Sat. 6.30. THE ONLY ROCK 'N' ROLL SHOW THE ROCKY HORROR SHOW.

CRITERION. From 8.30 am incl. Suns. 930 3216. CC bookings 379 6565. Mon.-Thurs. 8. Fri. and Sat. 5.40 & 8.30. IAN McKELLAN, TOM BELL. "I DOUBT THAT THERE ARE TWO FINER PERFORMANCES IN LONDON." Punch. BENT by Martin Sherman. Directed by Robert Chetwin. "FASCINATING . . . A WORK OF CONSIDERABLE DIGNITY AND PASSION." Guardian.

DRURY LANE. CC. 01-836 8108. Prev. ton't 8.00, opens tomor. 7.00, subs. 8.0, Mat. Wed. 3.00. Sat 5.45 and 8.45. CAROL CHANNING in HELLO DOLLY with Eddie Bracken. Box Office now open. GROUP BOOKINGS 01-730 2293.

DUCHESS. 01-836 8243. Mon. to Thurs. Evs. 8.00. Fri. and Sat. 5.30 and 8.15. OH! CALCUTTA! "The nudity is stunning." Daily Mail. 10th INCREDIBLE YEAR.

FORTUNE. CC. 01-836 2238. Evs. 8.00. Thurs. 3.00. Saturdays 5.00 and 8.00. AGATHA CHRISTIE'S MURDER AT THE VICARAGE. FIFTH GREAT YEAR.

GARRICK. CC. 01-836 4601. Evs. 8.00 (sharp). Wed. 3.00. Sat. 5.30 and 8.30. GARETH HUNT in IRA LEVIN'S DEATH TRAP. "BEST THRILLER." Daily Telegraph. "VERY INGENIOUS. VERY FUNNY. VERY EXCITING." Fin. Times.

GLOBE THEATRE. CC. 01-437 1592. Mon. to Fri. 8.00. Mats. Wed. 3.00. Saturdays 5.00 and 8.30. ANTON RODGERS, GEMMA CRAVEN, DIANE LANGTON, ANDREW C. WADSWORTH, DAVID HEALY in SONGBOOK. A new musical by MONTY NORMAN and JULIAN MORE. "A TOUCH OF MUSICAL MAGIC." NoW. "THIS STUNNING OCCASION. THE BEST BRITISH MUSICAL OF THIS YEAR AND A FEW GONE BY." Fin. Times. "VERY FUNNY . . . OFTEN HILARIOUS. RECEIVED WITH DELIGHT." Evg. Standard. "THE CAST IS BRILLIANT." Evg. News.

GREENWICH THEATRE. CC. 01-858 7755. Evenings 8.00. Mat. Sats. 2.30. THE PASSING OUT PARADE by Anne Valery. "Entertaining comedy . . . can see this doing well." Gdn.

HAYMARKET. CC. 01-930 9832. Evenings 8.00. Wed. 2.30. Sat. 4.30 and 8.00. GERALD HARPER, KATE O'MARA in The SHERLOCK HOLMES MYSTERY THE CRUCIFER OF BLOOD by Paul Giovanni. "The kind of spectacle I cannot recall since boyhood . . . terrific stuff." E. News.

HER MAJESTY'S. CC. 01-930 6606. Evgs. 8.0. Mats. Wed. 3.00. Sat. 4.45 and 8.15. Can you guess who dunnit? in THE CASE OF THE OILY LEVANTINE, the new play by ANTHONY SHAFFER, AUTHOR OF SLEUTH, starring HYWEL BENNETT. "ANTHONY SHAFFER'S LATEST THRILLER TO END ALL THRILLERS PARODIES THE CLASSIC AGATHA CHRISTIE COUNTRY HOUSE MURDER MYSTERY." Now. "A MAZE FULL OF PLEASURE TWICE AS SLIPPERY AS SLEUTH AND WICKEDLY INGENIOUS." E.D.P. "MR. SHAFFER HAS WRITTEN A HIGHLY ENTERTAINING PIECE OF INTRICATE NONSENSE WITH A SATISFYING BIZARRE AND GRUESOME MURDER." Eve. Argus.

KING'S HEAD. 226 1916. Dinner at 7.30. Show at 8.30. FIFTY WORDS. BITS OF LENNY BRUCE. "SHEER BRILLIANCE." Time Out. AN EVENING OF SHEER REVERBERATIVE RICHNESS, LAUGHTER AND DELIGHT." Guardian. "WITTY, PROVOCATIVE SHOW." E Std. "A FUNNIER EVENING THAN I COULD EVER IMAGINE SPENDING WITH LENNY BRUCE HIMSELF." What's On.

LYRIC HAMMERSMITH. 01-741 2311. Now rebuilt and restored to its original Victorian splendour. Theatre opens 18 Oct. Booking open now for Shaw's comedy YOU NEVER CAN TELL.

LYRIC THEATRE. SCC. 01-437 3686. Red. price prev. Oct. 16 8.00. Opens Oct. 17. 7.30. RICHARD BRIERS, PAUL EDDINGTON in MIDDLE AGE SPREAD. A new play by ROGER HALL.

LYRIC THEATRE. CC. 01-437 3686. Evgs. 8.00. Mats. Wed. and Sat. 3.00. JESSICA TANDY, HUME CRONYN in the Award-winning Comedy THE GIN GAME. Directed by MIKE NICHOLS. "TWO RARE AND SUPREME PERFORMANCES." Guardian. "EXTREMELY FUNNY." New Yorker. LAST 2 WEEKS. MUST END 6 OCT.

MAYFAIR THEATRE. 01-629 3036. From Tomor. Evg. 8.0. Fri & Sat 6.0 & 8.30. George Sewell, Dermott Walsh in THE HIT THRILLER WHO KILLED "AGATHA" CHRISTIE? "The best thriller since 'Sleuth'." New Statesman.

NATIONAL THEATRE. CC. 928 2252. OLIVIER (open stage): Fri. 7.30 (low price prevs.) RICHARD III by Shakespeare. LYTTELTON (proscenium stage): Ton't. 7.45 DEATH OF A SALESMAN by Arthur Miller. Tomor. 7.45 Close of Play. COTTESLOE (small auditorium): Last six perfs. Ton't. to Sat. at 8.00. WINGS by Arthur Kopit. Excellent cheap seats from 10 am day of perf. all 3 theatres. Car park. Restaurant 928 2033. Credit card bookings 928 3052.

OLD VIC. 928 7616. Old Vic Company Repertoire Season returns. 18th Century Comic opera and farce. THE PADLOCK; MISS IN HER TEENS. Previews tomorrow, Wed. 7.30. First night Thurs. 7 pm. Fri. 7.30. Sat. 2.30 & 7.30. For further information on the season ring 261 1821.

OLD VIC. 928 7616. English Music Theatre in the world premiere of the first Kubuki Opera "An Actor's Revenge" by Miki (5th, 6th, 10, 12th October). And Mozart's La Finta Giardiniera (9th, 11th, 13th October).

OPEN SPACE. 387 6969. Tues. to Sun. 8. Brecht's PRIVATE LIFE OF THE THIRD REICH. "One of his (Brecht's) most necessary works—chilling." Guardian.

PALACE. CC. 01-437 6834. Mon.-Thurs. 8.00. Fri., Sat. 6.00, 8.40. JESUS CHRIST SUPERSTAR by Tim Rice and Andrew Lloyd-Webber. For Party bookings apply Box office: Group sales Box Office: 01-379 6061. or Freephone 2381.

PALLADIUM. CC. 01-437 7373. YUL BRYNNER in Rodgers and Hammerstein's THE KING AND I. Also starring Virginia McKenna. HOTLINE 01-437 2055. Evenings 7.30. Mats. Weds. at 2.45.

PHOENIX THEATRE. CC. 01-836 2294. Evs. 8.00. Wed. 3.00. Sat. 5.00 and 8.30. SUSAN HAMPSHIRE, PATRICK MOWER. NIGHT AND DAY. A new play by TOM STOPPARD. Directed by Peter Wood. BEST PLAY OF THE YEAR. Evenings Standard Drama Award.

PICCADILLY. From 8.30 am incl. Suns. 437 4505. CC bookings 836 1071. Evs. 8.00. Thurs. 3 and 8. Sat. 5.30 and 8.30. PETER BARKWORTH, HANNAH GORDON in Brian Clark's new play CAN YOU HEAR ME AT THE BACK? "WONDERFUL PLAY WITH WONDERFUL PERFORMANCES." NoW. "ARTICULATE AND WITTY." D. Exp. "A SUPERBLY ABSORBING PIECE OF ENTERTAINMENT." The Sun.

PRINCE EDWARD. CC. 01-437 6877. Evenings 8.00. Mats. Thurs. at 3.00. EVITA by Tim Rice and Andrew Lloyd-Webber. Directed by Harold Prince.

PRINCE OF WALES. CC. 01-930 8681. Card bookings 930 0846. Mon., Thurs. 8.00. Fri. and Sat 6.00 and 8.45. LAST WEEKS. MUST END 29 SEPT. Michael Dennison, Dulcie Gray. ALAN AYCKBOURN'S smash-hit comedy BEDROOM FARCE. "If you don't laugh, sue me." D. Exp. A National Theatre Production.

QUEEN'S THEATRE. S. CC. 01-734 1166. Mon-Fri. 8. Wed. Mat. 3. Sat 5 and 8.15. JULIA McKENZIE, MAUREEN LIPMAN in a comedy by Richard Harris. OUTSIDE EDGE. "A PERFECT MATCH for the WEST END. FRESH, FUNNY & INGENIOUS." Dly. Mail. "QUITE SPLENDID." S. Exp. OUTSIDE EDGE. "THIS EXCELLENT COMEDY." Standard. Over 500 performances.

ROYAL COURT THEATRE UPSTAIRS. 730 2554. Opens Ton't 7. Subs. Ev. 7.30. London Premiere of GOGOL by Richard Crane.

ROUNDHOUSE. Tel. 01-267 2564. Nat. Youth Theatre in MIDSUMMER NIGHT'S DREAM. Evg. 7.00. Mats Tues to Fri 2.30.

RAYMOND REVUEBAR. CC. 734 1593. At 7.00, 9.00, 11.00 pm. Opens Suns. PAUL RAYMOND presents THE FESTIVAL OF EROTICA. 22nd sensational year. Fully air-conditioned.

ROYAL COURT. 730 1745. Last week Evgs 8. Sat 8.30. THE GORKY BRIGADE by Nicholas Wright. "Fine inventive production." F. Times.

ROYAL COURT THEATRE UPSTAIRS. 730 2554. till Sat Evs 7.30. London Premiere of GOGOL by Richard Crane. "Tour de force." Gdn.

ROUNDHOUSE. Tel: 01-267 2564. Nat. Youth Theatre in MIDSUMMER NIGHT'S DREAM. Evgs. 7.00. Mats. Tues. to Fri. 2.30.

ST GEORGE'S—The only Elizabethan Th. Tufnell Park Road, N7. 607 1128. Evgs 7.30. Ton't to Sat. AS YOU LIKE IT also in Rep. JULIUS CAESAR. 24-hour booking service.

ST. MARTIN'S. Credit cards. 836 1443. Evgs. 8. Mat. Tues. 2.45. Sat. 5 and 8. AGATHA CHRISTIE'S THE MOUSETRAP. WORLD'S LONGEST-EVER RUN.

SAVOY THEATRE. 01-836 8888. Credit Cards 01-734 4772. LESLIE PHILLIPS, TERRY SCOTT, JUNE WHITFIELD, SYLVIA SIMS in NOT NOW DARLING by Ray Cooney and John Chapman. Reduced price previews from Oct. 31. Mon.-Thurs. 8.00. Fri. and Sat 5.45 and 8.45. Group bookings 01-437 3856.

SAVOY THEATRE. 01-836 8888. Credit Cards 01-734 4772. "BILL PATERSON . . . one of those rare young lions of British Theatre." FT. WHOSE LIFE IS IT ANYWAY. PLAY OF THE YEAR. WEST END THEATRE AWARDS by Brian Clark. "Momentous play, I urge you to see it." Guardian. Evgs. 8. Sat. 5.45 and 8.45. Red. price Mat. Wed 3.0. Last Weeks. Ends Oct 27.

SHAFTESBURY THEATRE. 01-836 4255. From Oct. 1. Evgs. 8.00 in repertoire THE LUNATIC FRINGE. 4 smash hits of the Edinburgh Festival. THE COARSE ACTING SHOW From Oct. 1. THE CAMBRIDGE REVUE From Oct. 2. INSTANT SUNSHINE From Oct. 5. TIN PAN ALI From Oct. 29.

STRAND. 01-836 2660. Evenings 8.00. Mat. Thurs. 3.00. Sat. 5.30 and 8.30. NO SEX PLEASE—WE'RE BRITISH. LONGEST-RUNNING COMEDY IN THE WORLD. Directed by Allan Davis. GOOD SEATS AVAILABLE £2.50 to £5.50. £1 OFF all tickets booked and paid for 4 weeks in advance!

TALK OF THE TOWN. CC. 01-734 5051. AIR CONDITIONING. CREDIT CARDS. CELEBRATING 21 YEARS. From 8.00: Dining and Dancing. 9.30: SUPER REVUE BUBBLY. At 11: ROLF HARRIS.

VAUDEVILLE. CC. 01-836 9988. Evs. 8. Mat. Wed. 2.45. Sat. 5 and 8.30. EDWARD FOX in THE FAMILY REUNION by T. S. ELIOT. "Sheer magic." Financial Times. "This is Eliot's greatest play." D. Tel.

VICTORIA PALACE. CC. 01-828 4735-6. 01-834 1317. Evgs. 7.30. Mats. Wed. and Sat. 2.45. ANNIE. "BLOCKBUSTING SMASH-HIT MUSICAL." Daily Mail. Best Musical of the year 1978." E. Stand.

WAREHOUSE. Donmar Theatre. Covent Garden. Box Office 836 6808. Royal Shakespeare Company. Ton't Tomor., Wed. 7.30 premiere Nigel Baldwin's MEN'S BEANO. All seats £2.10. Students £1.10. Adv bkgs Aldwych.

WHITEHALL. CC. 01-930 6692-7765. Monday to Thursday 8.00. Fri. and Sat. 6.10 and 8.50. IPI TOMBI. "It's a foot-stamping pulsating action-packed African musical." News of World. FOURTH GREAT YEAR.

WESTMINSTER. CC. S. 01-834 0283. Evgs. 7.45. Mats. Wed. and Sat. 3.00. GILBERT AND SULLIVAN'S THE MIKADO. "The best Mikado I've seen." What's On. "A surprise and a delight." The Stage. Tickets £3.25, £4.25, £5.25. SEASON ENDS OCT. 20th. JOSEPH AND THE AMAZING TECHNICOLOR DREAMCOAT. November 1st-Jan. 19th. Book NOW. Ring 01-834 0283.

WINDMILL. CC. 01-437 6312. Twice nightly at 8.00 and 10.00. Suns. 6.00 and 8.00. Paul Raymond presents RIP OFF. The erotic experience of the modern era. Fourth great year. Now showing new second edition. New girls, new acts, new production.

WYNDHAM'S. From 8.30 am incl. Suns. 01-836 4082. Credit card bkgs. 379 6565. Mon.-Thurs. 8.00. Fri. and Sat 5.15, 8.30. "ENORMOUSLY RICH." Mary O'Malley's smash-hit comedy ONCE A CATHOLIC. "Very funny." Evening News. "Surefire comedy of sex and religion." Daily Mail. "MAKES YOU SHAKE WITH LAUGHTER." Guardian.

YOUNG VIC. 928 6363. HAMLET and ROSENCRANTZ & GUILDENSTERN ARE DEAD in rep from Oct. 3.

CINEMAS

ABC 1 and 2, Shaftesbury Ave. 836 8861. Sep. Perfs. All seats bookable.
1. THE DEER HUNTER (X). Wk. & Sun. 2.15, 7.30. 70 mm Dolby stereo (last 3 days)
2. PHANTASM (X). Wk. and Sun. 2.00, 5.30, 8.30.

CLASSIC 1, 2, 3, Haymarket (Piccadilly Circus Tube). 01-839 1527.
1: Peter Bogdanovich's SAINT JACK (X). Progs: 1.05, 3.25, 5.50, 8.15.
2: J. R. R. Tolkien's THE LORD OF THE RINGS (A). Progs. 12.30, 3.05, 5.40, 8.20.
3: George Hamilton LOVE AT FIRST BITE (AA). Progs. 1.25, 3.40, 5.50, 8.00.

CLASSIC 1, 2, 3, 4, 5, Oxford St. 636 0310 (opp Tottenham Court Rd. tube).
1. Woody Allen MANHATTAN (AA). Progs. 12.50, 2.50, 4.50, 6.50.
2. QUADROPHENIA (X). Progs. 1.30, 3.45, 6.10, 8.35.
3: HANOVER STREET (A). Progs 1.40, 4.00, 6.20, 8.40.
4. J. R. R. Tolkien THE LORD OF THE RINGS (A). Progs. 1.00, 3.25, 5.50, 8.20.
5. PORRIDGE (A). TO RUSSIA WITH ELTON (U). Sep. perfs. 2.00, 5.15, 8.00.

CLASSIC. Leicester Square. 930 6915. David Carradine DEATHSPORT (X). 12.05, 3.10, 6.15, 9.20. DYNAMITE WOMEN (X). 1.30, 4.35, 7.40.

CLASSIC POLY. Oxford Circus (Upper Regent Street. 637 9863. Peter Bogdanovich's SAINT JACK (X). Progs. 1.05, 3.25, 5.50, 8.15.

CURZON, Curzon Street, W.1. 499 3737. LEE REMICK in THE EUROPEANS (U). Progs. 2.00 (not Sun.), 4.00, 6.20, 8.40. "As near perfection as one could wish . . . a treat of a film." Alexander Walker, Evening Standard.

LEICESTER SQUARE THEATRE. 930 5252. THE CHINA SYNDROME (A). Sep. progs. Dly. 1.15, 4.45, 8.15. Seats bkble. at Box Office or by post for 8.15 prog. Mon.-Fri. and all progs. Sat & Sun. No late show booking.

ODEON LEICESTER SQUARE (930 6111). ALIEN (X). Sep perfs. daily, doors open 12.30, 4.00, 7.30. Late Night Show Every Night doors open 11.15 pm. All Seats bkble in advance at Box Office or by post. Except late night show Sun., Mon., Tue., Wed.

ODEON MARBLE ARCH W2. 723 2011-2. MOONRAKER (A). Sep. perfs. Wks. doors open 1.00, 4.20, 7.45. Evening perf. and weekends bkble. in advance.

PRINCE CHARLES Leic. Sq. 437 8181. World Premiere Presentation SCUM (X). Sep. Perfs. Dly. (inc. Sun.) 12.30, 2.45, 5.65, 8.35. Late show Nightly 11.15. Seats Bkble. Lic'd Bar.

STUDIO 1, Oxford Circus. 437 3300. Lic'd Bar. THE DEER HUNTER (X). 12.45, 4.05, 7.30. Late show Sat. 10.46.

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New Theatre, Cardiff

Welsh National Opera

by RONALD CRICHTON

Janacek's *The Makropoulos Case* returned on Friday night for Welsh National Opera's autumn season. As Emilia Marty, the opera singer who has lived for 300 years on an elixir, the American soprano Evelyn Lear succeeds Elisabeth Söderström. Miss Lear is companionable, even chummy, where Söderström was mysterious, humorous, elusive. To the opera's final scene, when the aged diva warily consents to the burning of the magic formula for prolonging life, Miss Lear brings fuller (if not always steadier) tone than he predecessor. *Here the lack of strangeness, a slight disadvantage in* the earlier scenes, makes the *sense of futility* more real.

Anyone who values opera which is also *a valid theatrical* experience should catch this Makropoulos—further performances at Cardiff, Birmingham, Swansea, Bristol and, on December 11, at the Dominion Theatre in London. Those who practise "music *theatre*" might note that though David Pountney's serviceable production includes some sharp characterisation, it is musical virtues that make the evening enthralling: careful balance between voices and Janacek's prickly orchestra and mostly admirably clear diction. Miss Lear's vowels are hard at first for English ears, but by the second act her words were as telling as anyone's.

Richard Armstrong conducts, sometimes permitting tension to sink below the level of high macabre comedy, yet always contriving to turn the screw in time. The orchestra was responsive in spite of traces of Tristan-exhaustion. Julian Moyle's Baron Prus (a potential Dr. Schön for WNO's next Lulu?) is an acquisition. Thomas Hemsley's tetchy layer Kolenaty is still invaluable in the rapid dialogues of the first act. The senile Count of Nigel Douglas, a polished study of amiable lunacy, is more nearly tuned to the former than to the present Emilia. Mark Hamilton confirms his acting ability in the tenor role of Albert Gregor.

On the next evening I gratefully took the chance of seeing the new *Tristan* warmly praised here by Max Loppert after the first performance. The Isolde *of Linda Esther Gray is already* remarkable—quite apart from the musical achievement—for an unforced, natural individuality which only lacks the continual ability to move expressively. For the "Liebestod" Miss Gray rose to her feet with the no-nonsense determination *of a valkyrie about to utter* war-whoops, then proceed to sing the cruelly demanding consummation with an unforced radiance that promised well for the future.

John Mitchinson's Tristan has *settled down*. The appearance is rugged and the physical evolutions inhibited, but few tenors in my experience (apart from the quite exceptional Vinay and Vickers) have made so much musical sense of the fearsome role—a few rasped phrases were a small price for the absence of the dismal "Am I going to last out?" under-the-note bleating that one has learned to dread. The Brangäne of Anne Wilkens is now an intelligent, sympathetic performance by a singer whose voice is not yet weighty enough for this role. How many adequate Brangänes, I wonder, can sing Handel as well as Miss Wilkens?

Some accounts of Goodall's Wagner conducting suggest an immensely slow torrent of endless sound. It isn't like that, at least in this *Tristan*. There is an extraordinary capacity for adjusting the scale of the performance to the available forces and to the small auditorium without losing grandeur. The result is more emotionally than physically shattering. Climaxes are beautifully graded to function without useless straining. A number of instrumental stitches were dropped, but of much greater importance was the impression of a unified conception embracing singers and orchestra, a conception moreover growing from the early stages of preparation. And those earlier stages of course include Richard Armstrong's general training of this orchestra. Saturday's performance was broadcast on Radio 3.

Maazel takes over Vienna State Opera

by ANTONY THORNCROFT

In the ornate grandeur of the Vienna Opera House on Friday, surrounded by busts of the great composers, Lorin Maazel officially confirmed what had been last week's gossip in musical circles—that he was to take over as director of the Vienna State Opera from the autumn of 1982 on a four year contract. He will be the first American to *hold what* is probably the top post in music, and he numbers among his predecessors Mahler and Richard Strauss. Perhaps with them in mind he specifically went out of his way to promise a new direction for the State Opera, along as yet undecided lines, even though *he hopes to retain his two principal* other jobs, as music director of the Cleveland Orchestra and chief conductor of the Orchestra National of Paris. However he has relinquished his post as principal guest conductor of the London Philharmonia.

Maazel, who is 49, was not among the favourites for the position but his long and impressive record (he made his debut as a conductor at the age of eight), and lobbying by the Vienna Philharmonic Orchestra, was enough to overcome the prejudice in giving this key job to an American. For in addition to the task of supervising three hundred performances of opera and ballet a year in the Opera House, the director also superintends a large artistic complex which includes the Vienna Philharmonic, a house devoted to operetta and two theatres, with a combined expense to the *Austrian Government of around* £25m a year.

To underline his commitment to Vienna Maazel is taking up residence there—the size of his undisclosed salary, and associated tax problems, were still under discussion almost up to the last minute—but he will *only conduct 30 performances a* year in Vienna, plus one new opera production. His first task will be to build up a team of able and creative subordinates, who may be drawn from outside Austria. For he wants the Vienna State Opera to present an international viewpoint, to be seen, by film and television, throughout the world, and to tour where possible. (A visit of the State Opera company to the U.S. starts next month, at a cost to the Austrian Government of over £800,000.)

Stephen Greif, Warren Mitchell and David Baxt — Leonard Burt

Lyttelton

Death of a Salesman

by B. A. YOUNG

Willy Loman, the salesman in Arthur Miller's great American tragedy, is an absolute zero. For 36 years he has been on the road for Howard Wagner's firm, and though he is immensely proud of having been to so many places and met so many buyers, he never once evinces any interest in what he sells. He has built himself an imaginary life in which he is a great hero in his trade, his son Biff is a popular and successful sportsman (although at 34 he has never done more than work spasmodically as a farmhand), his old age is to be crowned with a move into the country, with a garden and chickens and even a guest-house for his two boys. No one believes in him but his wife, or at any rate she never mentions his fraudulence to him.

Only in a nation where salesmanship is next to godliness could such a man be treated as a hero—and Willy is a hero all right, long before he kills himself in order to collect the $20,000 life insurance for his worthless sons. It it is hard to go along with such a judgment, the difficulties are swept away before a performance such as Warren Mitchell gives.

The untidy little man, a fountain-pen at the ready in the breast pocket of his shabby suit, is indomitable. He is his own best line, and he can hardly believe it when people turn it down. His eyes gleam behind his round gold spectacles, and there is a jauntiness about his movements even when the boys walk out on him after inviting him to dinner, even when his employer has to tell him that his employment is finished, even indeed when, after a mental discussion with his successful brother Ben, he leaves the house to take the car and crash it. It is a spectacularly good performance, a demonstration of Miller's remarkable achievement in giving such a bubble of self-deceit a true and individual existence.

The play skips irregularly in time and place, and Michael Rudman, the director, has required a multiple set (by John Gunter) showing the Lomans' sitting-room and two bedrooms as well as trucks providing other locations. Willy Loman's Brooklyn house is surrounded on all sides by frowning frontages of identical windows or metal fire-escapes, but they disappear at times to make way for backcloths of open country or, in the last mawkish scene, a cemetery.

This scene is the only one where I feel the sentiment untrue. At other times, though myself I find it hard to work up sympathy for Willy in spite of his misfortunes, all seems only too convincing—the idleness and disloyalty of the thieving son Biff (a nice performance by Stephen Greif), the childish mendacity of the younger boy Happy (David Baxt). To be caught by your son with a tart in your hotel bedroom must be an alarmingly unhappy experience.

Only Willy's faithful wife, always ready with an exact account of the debts for the week, provides him with a permanent resting place, but it is the imaginary achievements of his boys that give him pleasure, not the affectionate reliability of their mother. Doreen Mantle plays her beautifully, keeping sentimentality firmly at bay even when, over the grave, she recounts with a kind of muted triumph that the last of the mortgage has been paid.

Greenwich

The Passing-out Parade

A woman preaching, said Dr. Johnson, is like a dog standing on its hind legs: it is not done well, but you are surprised to see it done at all. A woman soldiering is the same. There is a curious notion still prevalent that *if you belong to* a uniformed body, it is a good idea to begin with close-order drill. Even the first traffic-wardens spent a little time on the square. So here are the new recruits of the A.T.S., destined to become clerks and cooks and hospital orderlies and drivers, crammed into khaki uniforms with collars and ties and chased around the parade-ground by shouting female NCOs.

Anne Valery remembers her days in uniform with affection, but not with much else. Her *play*, covering the initial training period of seven girl recruits, has nothing to say about *feminine* soldiers that could not have been said about masculine ones, though I doub if homosexual affection could have been so publicly practised in any barrack-room I ever knew of.

The squad, training in *Pontefract* in early 1944, is the usual miscellaneous bunch—an old soldier, a Yorkshire comic, a lovely young aristocrat, two lesbians (one temporary, one inherent), a Jew, a fascist. They have approximate working-class accents unless they come from good schools. Their conversation and their activities are hardly different from the behaviour only too familiar from barrack-room comedies on tele*vision and so on. There is no* plot, only a selection of daily events, ending with a passing-out parade where they are congratulated on their excellence by a C.O. played by Charmian May in a voice exactly like the Queen's.

Miss Valery's recollections seem to have dimmed over the years. The Army knows no such command as "Dress to the right" or "Forward march," for example. But a more urgent fault is the absence of any feel of wartime. War news from home and abroad is scrupulously fed in, but it is only embroidery. The domestic larks of the Newcastle family in Cecil Taylor's *And a Nightingale Sang*, though more remote from military service, really conveyed the pressures of the times. In *The Passing-out Parade* I don't feel them at all.

The recruits are tolerably played by an all-female cast under Jack Emery's direction. Miss May, with three other parts beside that of the CO, is outstanding among them. The only hint of subtlety, either in writing or playing, belongs to Sergeant Pickering (Pat Keen), who cunningly arranges to have the gay girl Stokes posted to her as an orderly-room help whose duties include calling her with tea in the morning.

B. A. YOUNG

'Name A Seat' scheme aids Royal Court

From the beginning of December the Royal Court Theatre in London will be closed for six weeks to allow vital work of re-seating and re-carpeting the auditorium. This work has become essential, as, says the theatre, "seats threaten to collapse nightly under our patrons."

The Royal Court has been informed by the Arts Council that funds from their Housing the Arts Fund are committed until 1985 so in order to safeguard the future of the English Stage Company at the theatre a "Name A Seat" scheme is being introduced.

Under this a benefactor's name will be inserted on the back of any seat in the theatre at a cost of £75 per seat (£50 in the gallery). So far £15,000 has been raised in this way but a further £30,000 is still needed.

Architecture

Paris for the man in the street

by COLIN AMERY

G. K. Chesterton had a pretty good idea of what Paris was all about: "We have said, then, that the Frenchman is the Man in the Street; that he can dine in the street, and die in the street. And if I ever pass through Paris and find him going to bed in the street, I *shall say that he is true to* the genius of his civilisation. All that is good and evil in France is alike connected with this open-air element."

Another Englishman, Sherban Cantacuzino has just filled a whole issue of that very English phenomenon, *The Architectural Review (September 1979)* with his views of Paris. Like Chesterton he feels that the essence of Paris lies in its streets rather than in the grandeur of its great architecture.

This special issue of *The Architectural Review* is a visual tribute to the people and places that make up the everyday world of the Paris street. The quality of its photographs and the intricacy of its layout make this a fascinating document that gives a careful and fair picture of Paris. This English view of the French capital is prefaced by an interview with Mayor Chirac who takes the opportunity to give some well-prepared political answers to several detailed questions. Although Chirac sees Paris as "the city that has had the courage to pick up the challenge of modernism without losing its soul in so doing" he is now acquiring a new sensitivity to the older complexity of the city. He has no intention of building the disastrous Left Bank Expressway and instead is keen to see Paris as a city for the pedestrian. He has abandoned any plans for monumental architecture to take the place of Les Halles.

His proposals for a new square by St. Eustache is only part of his plan to turn Les Halles into the largest pedestrian area in Europe, but *The Architectural Review*, with all its concern for the townscape, has nothing to say about the sinking of so many activities under a rather bland green blanket.

The amount of State control over the historic fabric of the city is formidable. A building that is in the field of vision or less than 500 metres from a classified historic monument has protection under the conservation legislation. In a city as rich as Paris this explains the relatively homogenous nature of the city's historic quarters. There is a kind of respect for the total fabric of the city that has protected Paris and is sadly absent from London.

Much of this feeling for the sense of city comes from the very high densities of Paris. People live at about six times the density of central London and there is an amusing quotation from Pierre Champion which describes the typical Paris building: "The shopkeeper lived above his shop on the mezzanine under the vaults, *which were low enough to* touch; the owner resided in the large first-floor flat which had panelling on the walls, a marble chimney piece and tall windows; the tenants occupied the second or third floor and the servants lived in the attics. All these people met on the staircase."

Living at these kinds of densities does tend to throw people on to the streets, and so the streets themselves are filled with a greater variety of life. One small street in Paris has achieved *a new kind of fame* from this publication, the Rue Mouton Duvernet in the 14th *arrondissement, is distinguished* for the richness of its service. In this one ordinary short street the locals support two bakers, a butcher, a fishmonger, two patisseries, a confiserie, a hairdresser, two newspaper shops, a chemist, a garage and several restaurants.

The English view of Paris is not just sentimental affection for the kind of street life that, if it happened in London, would probably be disastrous—it is also an enthusiasm for the efficiency of life in Paris. More than twice as many people travel on the Metro in Paris as use the Tube in London and the enthusiastic use of public transport by Parisians has a great deal to do with the special ticket that gives unlimited travel on all forms of public transport for one month for £8.50. London Transport should give it a try.

This special English look at Paris does give a good flavour of the city but it is sad that it has deliberately decided to ignore the new architecture of the last 25 years. The great weakness of the townscape approach to cities is that it avoids any serious consideration of architectural values. No amount of townscape can help La Défense or the Front de Seine or Italie 13, and while the *Architectural Review* is rightly entranced by the pavements of Paris it has missed a chance to evaluate the quality of her new architecture.

Courtyard off the Rue du Universite

St. John's, Smith Square

Monteverdi Christmas Vespers

by FRANK DOBBINS

"Within a short time, choir directors throughout the world will be busily putting together Vespers by Monteverdi for all manner of feasts within the scope of the Church year." And so it came to pass on Thursday at St. John's, Smith Square, when the author of these words, Denis Stevens, directed his *Accademia Monteverdiana* in a performance of Christmas Vespers, which he has recently edited for Novello and Co.

The neglect of the Vesper psalms, which the composer published separately, in comparison to the success of the Marian set (printed in 1610, before his appointment as choirmaster of St. Mark's) makes such new compilations inevitable. The perennial problem for early music concerts is a dearth of extended pieces to satisfy the gargantuan appetites of modern audiences. Thus, even if a liturgical sequence has little significance in the concert hall or Protestant church, it at least offers a framework of unity. And, when a degree of musical integrity is added, success is ensured, as the unusually large audience at St. John's testified.

It is a pity that such a renowned scholar as Denis Stevens did not use the specialist singers and baroque instrumentalists who have been proving their artistry and expertise at St. John's recently. As the sounds of sackbuts and baroque fiddles balancing the bright and lucid voices of the young generation of vocalists become familiar to British concert-goers, so conventional performances suffer the same strains as Bach or Couperin on the piano. The advantages of extra weight and sonority hardly compensate the loss in lucidity and delicacy.

On Thursday, while the Trinity Boys' Choir sang with impressive brightness, and the chorus and orchestra of the Accademia Monteverdiana were secure in intonation, the lack of crispness in articulation, diction, and co-ordination suggested insufficient rehearsal. The vocal solosits had their moments, in spite of enduring some problems of tessitura and balance. Mr. Stevens achieved much by firm direction and suggested much by judicious tempi and contrasts, although succes was more evident in the louder climactic passages.

Notwithstanding a less than perfect performance, it was a privilege to hear much great but unfamiliar music in a coherent form: and we should be particularly grateful for Mr. Stevens's completion of the truly sublime Magnificat, which crowned the concert.

RUGBY UNION BY PETER ROBBINS

Depression over the English game

SOME WEEKS ago Dick Jeeps — ex-England scrum half, former president of the RFU and now chairman of the Sports Council — delivered a whithering attack on the standards of English rugby. One major criticism was that since the arrival of coaches, forward play has been developed at the expense of back play.

One of the problems is that the English at present have only good forward play to mimic and draw inspiration from. The continual failure of the National XV has depressed rugby here.

There is indeed a depression over the English rugby scene with no sign of emerging talent on any scale. It will be most interesting to see where the successful members of the under-19 XV eventually wind up. The newcomers hopefully will have more enthusiasm for hard work than seems the case now.

This apparent disaffection is not just happening at the lower levels but even to first-class clubs. It is incredible that clubs such as Northampton and Moseley have not had good turnouts at pre-season training. Both clubs have made significant contributions to English rugby over the years and one can only be saddened that the *disciplines of turning up* consistently and on time for training should be so eroded.

Moseley have a particular problem which illustrates the thinness of three quarter talent in the Midlands. Malcolm Swain, Barrie Corless and Alan Hill have all been around for a long time but Corless admits there is simply no one to press them for their places.

At several first-class games this season I have been struck by fluctuating standards in the various regions. There are, in principle, 47 first-class clubs in England. In fact, the number would not realistically exceed 20.

Instead of clubs jockeying for first-class status bleating about being omitted from that list or not being designated a merit table club, the RFU could organise leagues so outsiders can get in and the talent that gets them in be seen.

Scotland's president, Jimmy Ross, has said he is delighted with the benefits of league rugby in Scotland. The present English system is simply not producing the quality players who must exist somewhere among the thousands playing every week in England. The RFU tersely rejected such a *league system at its July AGM* without justifying their rejection. It would be interesting to learn the rationale behind that decision.

Jeep's criticism regarding the neglect of three-quarter skills is certainly valid. The most imaginative individual centre paly I have seen so far came from John Whitehead, the Birkenhead Park centre. But the rest of the team is so poorly equipped up front that his true development is being arrested.

The Park were humiliated by Sale when I saw them but nevertheless contrived some flashes of unpatterned rugby which makes one wonder why other clubs with a greater spread of talent should be so predictable and dull in their backplay.

The partial answer is that many backs are not technically equipped either to take the chances or to conclude them satisfactorily. Mogg, for example, played in the centre for Gloucester at Bristol on Saturday and while he showed a willingness and skill to beat his man, his final passing was so appalling that all the good work was spoilt.

The Memorial Ground match was only too good an example *of the current English malaise*. Thankfully Hignell was in tremendous form and enlivened an otherwise dull afternoon. If only his place kicking was as as good as Butler's there would be no doubt about his place in the England side.

Howell, the Bristol scrum half, has aroused much favourable comment and is reserve to Peck in Brussels next weekend. He may have given away some penalties but nevertheless showed a wide variety of useful skills including the kicking with both feet—very necessary because the Bristol centres and wings could scarcely put a coherent move together due to inept handling and eccentric alignment.

Of the packs I have seen this season, Sale's have impressed me most. With Cotton now fit they look very well drilled and set for a good season. imaginative play.

The one aspect—not tactical or technical — I hope will be eliminated from all levels of rugby is this wretched collapsing of the scrum by some props. Players take, and accept, enough risks on the field but to wilfully endanger the life and work of an opponent seems to be totally unacceptable.

SOCCER BY TREVOR BAILEY

Division One standards take a drop

WEST BROMWICH Albion were a shade fortunate to earn a draw with Spurs at White Hart Lane with a goal from Alistair Brown in the closing seconds of an undistinguished, and bad-tempered match.

Although some of the blame for the shortage of football and the plentitude of fouls must fall on the referee, Mr. Burden, the real culprits were the players.

They served so much substandard football that it is no surprise to find both on five points at the foot of the First Division.

What is surprising is that there are five other clubs with the same number of points, while two points separate the bottom seven teams from the club which is currently seventh in the table, and only five points from the top spot.

The current leaders are Nottingham Forest, still some way from their peak, Crystal Palace, the perky newcomers from the Second Division, and Manchester United, who, on the two occasions I have seen them this year, have suggested that they are no more than a good, but unexceptional First Division side.

The small margin dividing the clubs suggests that the ability gap between the strongest and the weakest has narrowed, which must increase the chances of a close fight for the championship with an even more bitter struggle for survival at the other end.

This situation should be good for the spectators, but only if the apparent narrowing in the ability gap between the clubs is the outcome of a levelling-up, and not, as I fear, a levelling-down.

What has happened to Albion, who finished third in the First Division last season, with a style and sparkle that suggested, under the intelligent guidance of Ron Atkinson, they were on the brink of becoming a really outstanding side?

What are they doing at the foot of the table and, following their 2-0 defeat by Carl Zeiss Jena, last week, possibly out of Europe?

The answer is that they are without two brilliant goal scorers, Cunningham, who joined Real Madrid, and Regis, out with cartelage trouble.

This pair had the ability to take, and create, goals from seemingly harmless positions.

In addition, Cantello, now with Bolton, was missed when his presence would have made a difference to a midfield trio which provided an indifferent service and was short of both craft and ideas.

Their manager has bought Owen and Barnes from Manchester City. Although they are young and talented, they are not yet fully used to their new environment.

This is not just a matter of new colleagues and a different pattern, but also having to live in hotels instead of at home.

On Saturday, Owen and Barnes *proved largely ineffectual* and became very frustrated. Owen was substituted and Barnes was so completely shackled by the persistent Hughton that it was hard to understand how he can possibly be a member of the England team.

Deehan, the club's latest acquisition from Aston Villa, had a satisfactory debut, hitting the post twice, and WBA should experience few problems in quickly acquiring the respectability of a place in the middle of the table. They simply need to find something approaching *their true rhythm*.

Spurs should also move up the table because, although having several limitations, they do possess, in Ardiles, and Hoddle, two genuine artists and Yorath and Perryman, two 90-minute highly professional workmen. There were moments, usually when Ardiles was in possession, they threatened to destroy the Midlanders, but eventually had to settle for a goal from a penalty, which Hoddle converted with the elegance of everything he did.

The Spurs' front line was led by the very left-footed Jones and the powerful Armstrong, with Ardiles in close support slipping through the gaps and creating chances for less-cultured colleagues.

One felt particular sympathy for Ardiles especially when, in the first half, he rolled a dream pass across the face of the goal and saw this delicacy blasted over the bar.

A weakness in the present tactical pattern of the Londoners appears to be that their attacks are lacking in width. Even when a player found himself out on the wing, his centres were hopeful, rather than precision-moulded and it was also noticeable the number of one-footed footballers, who were forced to stop, turn and use the inswinging cross.

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Nicholas Leslie visits an entrepreneur whose successful engineering empire near New Delhi has spawned a workers' co-operative

An Indian vehicle maker gears up for exports

HARI NANDA is living proof that there is a great deal of truth in the maxim that to succeed in business you need the right connections.

Back in 1944 Nanda set up, with his brother Yuri, a small agency in Lahore, to import tractors. Those tractors were made by Ford, which gave Nanda his first major connection. After partition in 1947 when Lahore became part of Pakistan, Nanda moved to India and relocated his business at Faridabad, south of New Delhi. By that time he had also established a Polish connection, importing Ursus tractors.

Today, Nanda's company, which is called Escorts, has links with such German companies as Goetze, M.A.N., Rheinmetall and Fichtel and Sachs, together with Elektrim, of Poland, and in the U.S. with Fiat-Allis, International Harvester, Eversman and, of course, Ford.

Instead of just importing, Escorts also now makes Ford tractors under licence, together with its own tractor (based originally on the Ursus design), a range of agricultural and earthmoving equipment, motorcycles and motor-scooters and automotive components such as shock absobers and pistons.

Presence

Liaisons of this kind are as widespread in India as they are throughout the Third World. Many major Indian concerns, including such industrial groups as the giant Tata organisation, have used links with foreign companies to help power their expansion.

As in some other developing countries, those which established a sizeable importing business have now progressed to setting up their own manufacturing facilities to build products under licence, and in some cases to the eventual production of their own range of products. An added impetus to such progress in recent years has been Government restrictions on imports because of a severe shortage of foreign exchange.

Hari Nanda's strategy has been to build up the strength of Escorts in agriculture, transport and exports in order to answer "the core needs of the country," as he puts it. Behind Escorts' development of a wide range of agricultural equipment lies not simply market opportunity, but the belief that India must produce more food more efficiently and become a stronger presence in world markets, in order to strengthen the country's economy and to help raise the economic levels of other developing countries.

In more recent years Escorts' agricultural products have found markets not only in India, but also in Africa, Afghanistan and Nepal, and other countries.

Increasing emphasis has been placed on developing products that are entirely of Escorts' own design and not merely based on foreign products. The company has a scientific research centre where product development has been concentrated in the past few years on the introduction of a new range of tractors, while also finding new products—some of which are competing abroad with the established western majors—and new applications for existing products in the Escorts range of industrial equipment.

An example of a totally indigenous product and the opportunities it presents can be found in the motorcycle division which produces the Rajdoot range of vehicles. A Rajdoot GTS motor-cycle which is the first all-Escorts model, is considered to be stylish, but simple in overall design. And, significantly, one senior executive believes that this approach may prove to be a strength in competing with the Japanese for markets in developing countries.

He suggests that because Japanese motor-cycles have become more sophisticated, with more options being offered to cater for the whims of the developed world, they have become less suitable than have the likes of Rajdoot for developing countries, where simplicity and ease of service are the major priorities.

Certainly Rajdoot seems to need overseas markets if it is to sustain its rapid rate of expansion, since it already commands about one third of the existing Indian market. And because this is the maximum market share it is allowed by law, the rate at which it can raise production capacity is now strictly limited.

With so expansionist an outlook it is not surprising that Escorts has had to build up a strong management team. Private sector industry in India has historically had the best of available management, although an infusion of private sector managers into state-owned industries in the past five years or so has helped to redress the balance somewhat. Top executives still emerge from the wealthier sections of Indian society, after being educated overseas at universities and management schools, particularly in the U.S.

Merits

For all their Western management techniques, many Escorts executives find themselves having to operate at a very different grass-roots level from their Western counterparts. As an executive in the agricultural division points out, a constant educative role is required. Historically, people in rural areas have produced enough crops for their own requirements, plus a little extra. Now, he says, they have to be convinced of the merits of producing a surplus to meet the country's needs. Until this is done, it is difficult for an Escorts executive to convince the rural population of the benefits that agricultural machinery can offer to farming.

To match the needs of managing a modern industrial group with sometimes unsophisticated markets, Escorts has regular management training programmes. In adition to training, both management and staff are provided with recreational facilities, medical assistance and education, together with an employee welfare fund.

Over the past 35 years Escorts has grown into an organisation employing over 7,000 people in factories at Faridabad, Patiala and Bombay and with annual sales of over Rs 1bn (£56m). But as with most manufacturers of products such as motorcycles, tractors, agricultural machinery and earthmoving equipment it is involved essentially in an assembly operation.

At the helm, Hari Nanda remains the dominant figure of Escorts, but even the ownership of the company has broadened considerably and today there are over 10,000 shareholders.

Trevor Humphries

TOP: Hari Nanda, chairman and co-founder of Escorts. ABOVE: Escorts' Rajdoot motorcycles, in production at the Faridabad factory, have a major share of the market.

Paternalism and the State try a new type of venture

SEVERAL factories on either side of the long, dusty road through Faridabad, an industrial area south of New Delhi, bear the name "Escorts." Visually they are striking because they stand out like oases of imaginative design, in what is an otherwise architectural desert.

One of the buildings is particularly so, not because of its appearance, but because of the concept behind it. The factory is owned by the employees of Escorts and not by the company.

Oddity

Escorts Employees Ancillaries, as it is called, has been in existence for eight years, and is as unusual in India as industrial co-ops are in the UK. Indeed, it may well be unique in India.

The creation of such worker involvement is an oddity because the large proportion of India's industrial wealth which is not in State ownership is concentrated in the hands of a relatively small number of people. Paternalism is therefore a way of life, radiating through much of industry—including, to some extent, Ancillaries itself.

Ancillaries owes its existence not so much to a grand design, but to a paternalistic idea first mooted—quite by chance—in a business discussion among senior Escorts executives. The concept appealed to Hari Nanda, the chairman.

The original concept was to offer workers a chance to run their own manufacturing plant. But this was modified on the grounds that the proposed company stood a better chance of survival if it ran an agency business to start with, in order to gain experience in company management.

The initial capital of Ancillaries was Rupees 1m (£56,000). No employee may buy more than Rs 25,000 of shares, and a scheme exists whereby lower-paid employees can have the cost of shares deducted from their wages over a five-year period.

Escorts gave the infant company a leg-up in a number of ways at the outset, and is still on hand with free assistance if it is needed. For example, to assess how and where Ancillaries might seek its business, Escorts carried out project and feasibility reports, and helped to arrange Ancillaries' initial finance.

Then, to ensure a good start for Ancillaries, Hari Nanda decided that the worker-owned company should be appointed dealer for Escorts' Rajdoot motor-cycles and scooters in Delhi and Gurgaon. This must have given the new company's owners a springboard into a business with which they were totally familiar.

Not surprisingly for so novel a concept, the theory and the practice have not entirely matched up. Instead of an even representation of employees, there are more white collar than blue collar worker shareholders, and it is the senior Escorts employees and executives who hold the bulk of the shares.

And, while Escorts claims to pay an average monthly wage of Rs 337 (£19), compared with the average of Rs 1*5 (£10.30) for the Haryana state in which Faridabad lies, it seems that the lowly paid will need a lot of encouragement to comit some of their cash to anything other than their own immediate needs.

Blue collar

There are eight Ancillaries directors, one of whom is selected by staff and one by the workers. Then there are four "honorary" directors who are either Escorts directors or senior executives. This uneven representation, say senior executives, has been created largely by the need to ensure strong direction. They maintain that they hope to see more blue collar shareholders and policy-makers, and that they encourage such workers to aim for this objective by buying shares and actively involving themselves in the development of the company.

Meanwhile, a counterbalance to Escorts' influence exists through the two Government nominees on Ancillaries' Board. They were appointed after the State granted Ancillaries a Rs 5m loan to enable it to build a factory and branch out into manufacturing. The State has an option to convert part of the loan into Ancillaries equity, a move which would make it a dominant shareholder. But many people inside the company do not expect it to make such a move.

Over the past eight years the Ancillaries equity has been increased from Rs 1m to Rs 2.5m (though shareholders have had to wait until this year for their first dividend to be paid). These funds, together with the government loan, have paid for the construction and equipping of the factory at Faridabad, which this year went into production for the first time.

Related

For its first manufactured product, Ancillaries has again relied on Escorts. Technical links have existed for some time between Escorts and Mikuni Kogyo Company, of Japan, and a Mikuni carburettor, with which Escorts could itself have gone into production, has been passed on to Ancillaries.

By moving into the manufacture of carburettors—part of the output of which Mikuni is committed to taking for its own use—Ancillaries has, somewhat belatedly, realised one of its prime original objectives: to have a production facility of its own under worker control. In this new phase of development it still has to prove itself, though its continued future seems beyond doubt, given its backing. But whether that success will emerge from a truly independent worker-owned and controlled business, free of the Escorts' umbilical chord, is the big question.

Management abstracts

These summaries are condensed from the journals of abstracts published by Anbar Management Publications. Readers wishing to consult original texts should write to: P.O. Box 23, Wembley, HA9 8DJ.

Egyptian Lessons for Materials Management and Purchasing. A. H. Schaafsma and J. W. Schrakamp in International Journal of Physical Distribution and Materials Management (UK), Vol. 9 No. 4: p. 203 (7 pages, charts)

Offers the theory that the Egyptian Empire collapsed because it ran into procurement difficulties over iron ore, and uses that awful warning to make the case for a strong and co-ordinated materials management function. Watch out for "The lessons of the Egyptian slave labour system for recruitment practices."

The Depth and Extent of Peer Review. R. Radford in Accountancy (UK), Apr. 79: p. 68 (3 pages)

Outlines the peer review programme sponsored by the American Institute of Certified Public Accountants, and describes how a typical review would be carried out; notes that the UK profession is hostile to the adoption of the peer review, but suggests that the U.S. example gives pointers to the control of audit quality.

New Concepts in Brazilian Accounting for Inflation. R. Fleming in The Accountants Magazine (Scotland), Apr. 79: 162 (4 pages)

Brazil has for many years used inflation accounting. The author describes a recent change to the country's tax structure which has the effect of reinforcing the separation of trading results from inflationary effects (and which allows a tax deferment of inflationary gains until they are realised)

Workers' Self-Management: the Yugoslav Experiment. J. Ramondt in British Journal of Industrial Relations (UK), Mar. 79: p. 83 (12 pages)

Reports research into the conduct of Yugoslav industrial enterprises that reveals the nature of a power struggle between the policy authority of "self-management" bodies such as workers' councils and the authority of executive management; shows how executive management has increased its power and discusses the nature of worker/management conflict and how it is controlled.

Social Responsibility Disclosure. D. R. Beresford and S. S. Cowen in Business (USA), Mar./Apr. 79: p. 15 (6 pages, charts, tables)

Surveys the extent to which industrial companies, banks and life insurance companies are providing details of social responsibility support and action in their annual reports to shareholders; a useful appendix lists general categories of social responsibility and the individual topics contained within them.

Finding—and Keeping—Corporate Entrepreneurs. H. E. Kierulff in Brussels Horizons (USA), Feb. 79: p. 6 (10 pages, tables)

Defines the corporate entrepreneur as an employee who identifies new business ventures, obtains resources for their development, and initiates production and sales. Outlines the personality characteristics of such individuals, and discusses where they can be found. Offers guidelines — in terms of money, personal recognition, physical and hierarchical location — for finding entrepreneurs and keeping them happy.

Music in the Workplace. A J. Scott in Work and People (Australia), Vol. 4 No. 1/2: p 20 (2½ pages).

Traces the history of music at work, discusses its function in increasing operator altertness, and presents selective research findings.

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Rhodesia: so far, so good

AFTER TWO painfully slow weeks, the Lancaster House conference on Rhodesia has begun to make significant progress. There is now a better than even chance that the various parties to the conference will agree on a constitution. If and when that happens, stage one of the conference will be over.

It is far too early, however, to start being optimistic about the final outcome. Lord Carrington's strategy is to address one issue at a time. Agreement on a constitution is the first and probably the easiest issue on the Lancaster House agenda. The list of remaining items is a formidable one: who will govern the country during the six or seven-month transitional period between the conference and fresh elections? How and by whom will the country be policed? What happens to the various warring armies? When will sanctions be lifted? The war is unlikely to end until all these issues are resolved. There is still a long way to go.

In the first two weeks, a number of potentially serious roadblocks have been removed. Whoever it was who decided that Mr. Smith should be included in the Bishop's delegation made a wise decision. Mr. Smith in London, faced by the reality of the issues at stake, and forced to declare his hand at the negotiating table, is an altogether different proposition to Mr. Smith providing a critical running commentary back in Salisbury.

Unchallengeable

During the past week, Mr. Smith has dug in his heels. But to his own evident surprise, he has found himself isolated. He has come under pressure, for a variety of different reasons from his fellow white delegates, from the South African Government without whose economic support Zimbabwe-Rhodesia would crumble, and apparently also from Lt.-Gen. Peter Walls, Zimbabwe-Rhodesia's head of Combined Operations, to agree to Lord Carrington's proposals.

For 15 years, Mr. Smith has been the unchallengeable leader of Rhodesia's white community. It would be unwise to underestimate the power that he still has. But it is beginning to look as if important and influential elements in Rhodesia's white community recognise that events have overtaken Mr. Smith.

The last week has also served to give some coherence to the Salisbury delegation. It arrived far less well prepared for the conference than the two Patriotic Front leaders, Mr. Joshua Nkomo and Mr. Robert Mugabe. There is still an Alice in Wonderland element to the way the Bishop's team conducts its proceedings and arrives at its decisions. But Bishop Muzorewa's acceptance at the end of last week of the "general principles" of Britain's constitutional proposals was a considerable achievement both for the Bishop and Lord Carrington. Almost more significant was the cautious acceptance by the Salisbury group that it would eventually have to get down to talking about transitional arrangements.

Pinned down

The spotlight now turns back on to the Patriotic Front. Here too there are encouraging signs of shifting positions. The Patriotic Front is not insisting, as it has in the past, on control of the armed forces during the transitional period. In its proposals for governing the country during the transitional period between the conference and new elections, it has specifically included the existing Salisbury regime, whose black members in the pre-conference rhetoric were "traitors" with whom the PF would "never deal." Patriotic Front leaders seem willing to drop their opposition to guaranteed white representation in the post-independence Rhodesian Parliament.

Lord Carrington's task now is to pin down the Patriotic Front in the same way as he pinned down the Bishop last week. He may well need, and knows he can call on, the support of the African Front Line Presidents in achieving this objective.

Always in the background are the tricky issues of sanctions and international recognition. Lord Carrington left for the United Nations yesterday to report on progress to date. Two weeks from now, he will take the train to Blackpool to address a very different kind of gathering at the Tory Party conference. The Foreign Secretary is balancing on a knife-edge in his attempt to satisfy both world opinion and his own party with his Rhodesian policy. The sanctions issue, with its looming November deadline and the powerful emotions that it raises, could still cause trouble.

How much trouble will depend on what kind of progress is made between now and November at Lancaster House. The verdict after the first two weeks is: so far, so good.

The Liberals kick off

THE RUN-UP to the party conference season this year has been almost entirely dominated by the arguments within the Labour Party, although there have also been hints of a Right-wing Tory rebellion on Rhodesia. The Liberals have had scarcely a look-in, and from their point of view it is no doubt slightly unfortunate that they should be the first to appear. Their conference opens in Margate today.

Compassion

The Liberals stand to benefit from Tory failure in office and Labour dissension in opposition. Probably they need both to do well. For if the Tories fail while Labour remains reasonably united, there seems no reason why votes should not simply swing back to the Labour Party both at by-elections and at the next general election. Equally if the Tories succeed and Labour is more than usually divided, the natural outcome would be a rise in Tory support. Either way, there would be little need for the Liberal half-way house.

Politics, however, rarely works in so absolute a fashion. It is more likely that the Tories will neither completely succeed nor completely fail and that the Labour Party will continue to hold together, however precariously. For the Liberals, therefore, it will be a case of seeking to win over those Tory voters who believe that the Conservative Party under Mrs. Thatcher is moving too far to the right, and those Labour voters who fear that their own party is moving too far to the left. The simplest way of putting it is that the best way forward for the Liberals is to establish themselves as what in other countries would be known as a social democrat party: one which puts compassion and common sense above ideology and whose values are liberal with a small "l."

The competition for this ground is more intense than it looks. Although it is the argument between Mr. Callaghan and his Left-wing about the Labour Party's future organisation which has made the headlines, there are in fact several prominent party members who have declined to join in. Mr. Healey, for instance, has referred to the organisation debate only in passing, and Mr. Shore not at all. The struggle to maintain the Labour tradition of a pragmatic social democrat party goes on, and no doubt will continue to do so even if the votes on organisational questions at the Labour conference in Brighton next week go in what Mr. Callaghan would regard as the wrong way. Anyone who queries that has only to look at the flood of literature now coming from the party's right-wing. It is much too early to say that Labour is destroying itself, and in any case that it is a curious view of a party that has been more or less consistently ahead in the opinion polls since the general election last May. There is an internal debate, as indeed there should be.

It is also too early to deliver judgment on the Tories, except to note that Mrs. Thatcher's basically Right-wing instincts do not always prevail. The Prime Minister bowed to advice on Rhodesia and on the question of the Vietnamese boat people. It was striking, too, that several senior Ministers voted against the restoration of capital punishment. Clearly the Tory Party still has a liberal streak. It would be unusual if it were to lose consciousness of the need to maintain the middle ground.

Revival

It remains true, however, that the Liberals are the party not associated with the big battalions and that they may well be able to profit from that position. That is how Mr. David Steel, their leader, fought the last election campaign, and in the circumstances he was remarkably successful. Certainly, as Mr. Steel said in a radio interview at the week-end, a Liberal revival during the present Parliament would start from a stronger base than for many years. It may be an unenviable task to lead a party which is practically banned from power by the electoral system, and which can only gain from others' mistakes. But at least we should be grateful that we have the Liberals to fall back on. It is the possibility of a Liberal revival that should keep the Tories especially on their toes.

Margaret Hughes examines the implications of the controversial Rolls-Royce/TriStar deal

The cost of keeping RB-211 engines in the air

John Nott, Britain's Trade Secretary, at the Lockheed plant in California earlier this month

EARLIER THIS month Mr. John Nott, Britain's Trade Secretary was in California to see Rolls-Royce RB-211 engines being fitted to the first Lockheed TriStar built for Pan American Airways. The first aircraft is due for delivery in February next year.

Eighteen months ago, Pan Am placed a $520m order for 12 long range Lockheed L-1011 TriStars fitted with RB-211 engines. It was a major breakthrough for Lockheed and Rolls-Royce. Both desperately needed the order.

In announcing the deal Pan Am said that the RB-211 engines had been selected because of their "technological superiority." But the deal illustrates all too clearly that the financing of an order is as important, if not more so, than the quality of the product itself. The first stage of the financing was signed last month.

Lockheed needed the Pan Am order to keep its California production line going. British Airways and Delta Air Lines had already bought TriStars but after that the order book was looking decidedly bare. A big order from a major U.S. carrier flying extensive international routes was just what was needed—U.S. airlines account for some 60 per cent of the world aircraft fleet.

All previously sold TriStars had been fitted with RB-211 engines, but this time Rolls-Royce faced fierce competition from U.S. engine manufacturers. General Electric was offering the CF6-50 engine, Pratt and Whitney its JT-9D engine. Pan Am has traditionally ordered U.S. engines.

The signing of the deal was greeted with the applause befitting such a success. But this turned to criticism when it became clear just how the order was secured. It caused a furore both in Britain and the U.S. Not only had Rolls-Royce undertaken to arrange all the financing but Britain's Export Credits Guarantee Department (ECGD) had agreed to provide credit insurance cover for the whole deal—not just for the Rolls-Royce share of the contract.

UK exporters only covered

Like any other Government export credit organisation, ECGD provides insurance cover for UK exporters only. Occasionally this has been extended to cover the foreign content of a UK deal where this accounts for only a small portion of the contract.

But in the case of the Pan Am deal, the supply of the airframe by Lockheed accounted for about 75 per cent of the contract. ECGD was, therefore, agreeing to provide insurance cover for a deal which was essentially between two U.S. companies—Lockheed and Pan Am.

The provision of insurance cover for the entire deal was a vital element in securing the Rolls-Royce contract. And while this was in itself a major departure it was also recognised that in doing so ECGD was providing access to favourable financing for the whole contract.

In the event ECGD has had to provide full 100 per cent unconditional bank guarantees for the entire $520m deal. This means that if for any reason the buyer—Pan Am—defaulted on payments then three months after the due date ECGD would unconditionally make the payment to the banks. This guarantee covers the financing banks for the full 100 per cent of the credit allowed to the buyer.

For Pan Am, already burdened with heavy long-term loan and lease obligations, the guarantee was a positive life raft. Without it the company might well have found it difficult to raise the necessary financing. On top of this, neither Lockheed nor Rolls-Royce were without their financial problems.

Equally crucial, though less controversial, was ECGD's agreement to match the financing terms for the engines side of the contract with those of Rolls-Royce's U.S. competitors.

As the financial details emerged the whole deal was criticised on both sides of the Atlantic. On this side Britain was accused of providing its Rolls-Royce engines far too cheaply at the taxpayers' expense. This was accompanied by cries of unfair competition from U.S. manufacturers and the U.S. Treasury.

In defending this undertaking, the British Government said that it was simply matching the terms of the main competitors, the U.S. engine manufacturers which were offering very favourable financing, allegedly also for the entire deal. It was deemed to be in the national interest that Rolls-Royce, now Government-owned through the National Enterprise Board, should secure the contract.

It would open up the crucial U.S. market if Pan Am selected TriStars fitted with RB-211 engines, provide substantial spin-off orders for other UK companies, such as Lucas Aerospace and Smiths Industries, and preserve jobs. Were Pan Am to choose U.S. engines, the outlook for further RB-211 orders, it was argued, would be far gloomier.

Some 90 per cent of ECGD's business is insured on a purely commercial basis under Section 1 of the Export-Guarantees Act. But ECGD cover for deals which cannot be justified on a purely commercial basis but which are none the less considered to be in Britain's interest are permitted under Section 2 of the Act. Such contracts require approval by Treasury and any other Government department which has a direct interest in the particular sale. Even so the commitment on the Pan Am contract went beyond anything which had previously been undertaken within Section 2.

When the contract was signed with Pan Am, Rolls-Royce had taken the unprecedented step of agreeing to raise the finance for the whole deal and had given a pledge on the cost of this financing. ECGD has had to meet this commitment.

The financing is being partly raised in London and partly in the U.S., all under ECGD guarantee. The UK financing has been raised by a separate company, Rolls-Royce Finance, to keep the financing apart from the aircraft/engines deal.

Because Rolls-Royce undertook to raise the finance on Pan Am's behalf, ECGD has had to amend its normal bank guarantee. Usually this guarantee covers the bank against default by the buyer. But in this case there is a third party, Rolls-Royce, so that ECGD is effectively guaranteeing the banks against default on loan repayments by both Rolls-Royce and Pan Am.

The $260m which is being raised in London has now been signed. This is in two parts, a normal $130m foreign currency buyer credit and a $130m fixed rate loan. Both loans have been put up by the same international banking consortium led by Hill Samuel and Sumitomo Bank. The other banks in the consortium are Citibank, Barclays Bank International, National Westminster Bank, Sumitomo Trust and Banking, Dai Ichi Kangyo Bank, Kyowa Bank, Saitama Bank, Tokai Bank and Taiyo Kobe Bank.

The buyer credit is eligible for the usual interest rate subsidy whereby ECGD makes up to the banks the difference between market rates and the fixed export credit rates which are set by an OECD agreement. The other $130m loan is also at a fixed rate but it is not eligible for the same interest rate subsidy and as such is less attractive to the lenders.

This is why the same banks are putting up the funds for both loans — the more attractive terms of the buyer credit offsetting those of the other loan, which in any case does have the advantage of an ECGD guarantee. The interest rate on this loan is also understood to be higher.

Much of the problem of the financing is the result of Rolls-Royce's commitment to Pan Am on the cost of the financing. Since then interest rates have risen sharply and inevitably the cost of raising the finance has become more difficult. The Japanese banks were apparently persuaded to put up the necessary funds — provided they participated in both loans — as it gave them access to the UK buyer credit market.

But the intricacies of the financing do not end there. Though both the loans raised in the UK have now been signed, a final step has still to be completed and this is directly linked to the financing which is being raised in the U.S. This third loan of $260m is to be raised through a private placement using an equipment trust arrangement and is being handled by Lehman Brothers and Citibank.

Under this mechanism the lenders receive certificates in an equipment trust which will be set up to own and lease the TriStar aircraft to Pan Am over 15 years. The leasing payments made by Pan Am will provide the funds for the trust to repay the borrowers.

The advantage of this arrangement, now in wider use in the U.S., is that it divorces the equipment from the financial position of the user, Pan Am. The holders of the trust certificates have a share in the ownership of the aircraft and in this particular case have the added advantage of ECGD's guarantee against default by Pan Am on its lease payments.

The financing raised in London will also be converted into trust certificates when the trust itself has been set up. All the financing arrangements have to be completed by February next year when the first aircraft is due for delivery. Altogether six aircraft are to be delivered in the early part of next year with delivery of the other six due in early 1981.

It is not clear quite how the financing is to be allocated to the two sectors of the contract—the airframes and the engines. It would seem that all three loans will cover parts of both. The terms for government-backed credits for aircraft financing are not covered by the OECD agreement reached by the main exporting nations in 1976. This is because the participants have not been able to agree on the issue.

Hardened U.S. attitude

The U.S., which is basically against subsidising export finance at all, wants to include aircraft within the agreement with a view to shortening the loan repayment terms while European countries are strongly resisting this move. The Pan Am/TriStar contract, along with the Eastern Airlines Airbus deal, has hardened U.S. attitudes. As a result negotiations on improving and tightening up the OECD agreement itself are at a stalemate with neither the U.S. nor the EEC giving any ground.

As an interim measure aircraft financing is covered by an OECD "standstill" arrangement whereby individual countries agreed some four years ago not to extend credit terms which were more favourable than those they were offering at the time.

This does not cover interest rates—as the full OECD agreement does—merely the period of the loan. The maximum is ten years for large jets. Strictly speaking the aero engines are governed by the OECD agreement and for this particular deal the minimum interest rate would be 8 per cent and the maximum period of the loan 5 years. However, because the engines are being sold with the airframes (as is usual) it is conveniently being argued that they also fall under the same "standstill" rules as the aircraft.

In fact the interest rates on all three loans are expected to comply with the agreed OECD interest rates. The rate on the buyer credit is understood to be 8 per cent and that on the UK raised fixed rate loan 9¼ per cent while the U.S. financing is expected to be in line with interest rates in the U.S. where prime rate had recently hit 13¼ per cent.

The length of the UK raised financing is believed to be 10 years thus complying with the "standstill" terms though not with the OECD agreement. The length of the U.S. loan will, however, be 15 years and thus in clear breach of any international agreement.

Pan Am has options on a further 14 aircraft but Rolls-Royce says quite firmly that the same financing arrangements will not be used again. This is understandable since the present exercise is likely to have proved rather costly. Apart from anything else interest rates have moved sharply upwards since Rolls-Royce made its commitment to Pan Am on the cost of financing. The U.S. fund raising, in particular, is likely to prove more expensive than anticipated.

ECGD is equally adamant that it will not undertake such a commitment again but when another deal deemed vital to the survival of British industry is in the balance, the pressures are likely to be just as great. Under these conditions international efforts to eliminate the cut-throat export credit competition is quickly forgotten by both Britain and its competitors.

MEN AND MATTERS

'Building regs' may be demolished

After last week's lunge at his departmental quangos, Michael Heseltine may be planning to axe building regulations. This would be in line with the Conservative policy of "making a bonfire of controls." At the moment, a builder can scarcely put one brick on another without having plans passed by his local "building regs" inspector.

There are 7,000 building inspectors attached to local councils in England and Wales (Scotland has a system all its own). If orders went out from the Department of the Environment to prune them (average salary, £7,000 a year) and their ancillary staffs, the economy could be considerable.

To do so, Heseltine would first have to slash the regulations themselves. I gather that building industry delegates to his department have lately been asked with seeming casualness: "What would you say to the idea of abolishing building regulations?"

One such caller tells me: "At the very least, I think that there must be some internal memorandum going the rounds." It is common knowledge that a quango called the Building Regulation Advisory Committee is "under close scrutiny."

Building regulations were introduced as recently as the mid-sixties. Before then, local byelaws governed standards. But without the "regs," would speculative builders start running up houses that might fall down in a few years because of inadequate foundations and the like? The protagonists of abolition say the consumer protection laws would be sufficient guard against that.

Fraenkel's focus

At a time when Clive Jenkins has been making great play with his forecast that the silicon chip will decimate white collar jobs, it is refreshing to hear an "inside track" rejoinder. "It is a useful political statement, but experience does not support it," says Gerald Fraenkel, head of Europe's biggest maker of microfilm printers.

Fraenkel has been involved in microfilm technology for 20 years. "It was a terrific struggle for the first 15 years," admits the 57-year-old Imtec chairman. "These developments are slow to take off. That's why I think that in most offices it will be a long time before the silicon chip has any effect."

Operating from a factory in Stanmore, Middlesex, and a sculpture-filled penthouse in Soho, he is gratified to have reversed the office technology trend: two Japanese companies — one is Fuji — have just taken on agencies for his microfilm printers; and two months ago he started a German subsidiary.

Fraenkel is a former ballet-dancer who got into microfilm technology by way of printing. "I'm a self-taught scientist," he says. Imtec, which now has a £6m annual turnover, was started five years ago with £25,000 capital. Fraenkel's close collaborators, designers Paul James and Martin Seib, have been with him since the fifties.

Perhaps because of his background, he is ready to talk openly about what he calls the "technological Tower of Babel." He says that many makers of office machinery deliberately make their equipment incompatible, to tie up a slice of the market. "The Americans do it under the guise of establishing standards," he says. "It's a basic marketing technique."

Such views should stimulate the Neddy working party on the Office Machinery Sector, which Fraenkel joined recently. "The government is the country's biggest buyer of office machinery and it only pays lip-service to supporting British companies," he argues. "Its policies have effectively killed our own photo-copier manufacturers."

Upmanship galore

The ghost of novelist Eric Linklater will surely be hovering over a marketing thrash in Claridge's Hotel this morning. It would delight his satiric humour that his native Orkney Islands — a spot scarcely noted for extravagance — is spawning what claims to be the most expensive whisky ever sold.

But what is £10 a bottle (give or take a few pence) nowadays to the refined sort of boozer? After all, there is a tax rebate coming up soon; the 12-year-old malt may even have arrived in time to stop some of that being laid out on foreign imports.

The hard-headed Scots who will be crying their wares today in Mayfair say the newly-launched brand, named Highland Park, comes from the most northerly whisky distillery in the world. But it is snob appeal, not geography, that they are relying upon: "Try a nip of this — costs more than Chivas Regal, old man."

Of course, at that sort of price, it needs to taste all right as well. It seems that the advertising will be "discreet," in such organs as Country Life and The Field. I hope the new tipple does not make our rural gentry fall off their horses.

Slice of life

A Nestle's subsidiary in Sweden has just destroyed 20,000 tins of fruit cake intended as snacks for Saudi Arabian schoolboys. This was done to safeguard a $4.65m contract for 10m such tins, after two employees were discovered to have filled one tin with washing powder and two others with vegetables.

"The Saudies are very quality conscious, so we could not take any chances," said Ulf Praesto, a company chairman. "We expect the order to be extended if they like the first consignments."

The two employees have been swiftly removed from the fruitcake factory.

Terrors of Europe

Take heart that Euro-apathy at home does not deter our representatives in Strasbourg. For the session opening there today, the British contingent has put down more questions than all the other members combined. Predictably, a lot are about food mountains — for instance, Barbara Castle is bashing butter sales to Russia.

But our people are into obscurer corners too. Lord O'Hagan and Robert Jackson (don't say you've never head of *them*) are both asking questions about oak wilt. That should the Continentals we are on the ball. I gather the dreaded wilt has some bearing on casks for the liquor trade.

Observer

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FINANCIAL TIMES SURVEY

Monday September 24 1979

Commercial Vehicles

The long-expected restructuring of Europe's commercial vehicle industry could well be sparked off by recent news of more technical and manufacturing co-operation between companies. Major producers are faced not only by severe price competition but also a decline in demand, in unit terms, due to the general trend towards larger—and fewer—vehicles.

European market faces big changes

THE STRUCTURE of the European truck industry could change dramatically and quickly now that the PSA Peugeot-Citroen group has declared its intentions. PSA only three weeks ago made it clear that, not only will it keep the Dodge Trucks operations it acquired along with Chrysler's European interests at the beginning of the year, but is also going to develop Dodge into one of Europe's more-important truck businesses.

The declaration of intent came with the news that Dodge and DAF Trucks of Holland are investigating the possibility of technical and manufacturing cooperation.

Giving the details, Mr. Patrick Mannion, a director of Chrysler Europe and deputy group director of Dodge Trucks Europe, maintained: "PSA has been looking at the long-term potential of the Dodge Trucks business. This is PSA's way of saying: "We want to develop the business and make a success of it."

He was full of hope that when—not if—the deal with DAF was completed the nucleus of a new truck "club" would be formed and that it would attract other companies.

This would certainly spark off the long-expected restructuring of the European Commercial vehicle industry.

Although it would have been a little surprising if PSA had decided to sell off Dodge—given that it is a profitable business based in the UK, one of Europe's bigger markets, and Spain, the fastest-growing—it would have been understandable.

After all, PSA faces a huge task, both financial and in management terms, to assimilate Chrysler Europe and turn it round so that it is making a reasonable return on assets.

And going-it-alone with Dodge would have been something of a gamble. With an annual out put of around 20,000 trucks and 10,000 light commercials, Dodge is in the minor league compared with the major European groups. For example, Daimler-Benz of West Germany and IVECO produce around 240,000 and 109,000 commercials a year respectively.

Dodge's "home" markets, Spain and Britain, represent only 30 per cent of potential European business and the company needs new products and to enlarge its range fairly quickly.

All this would involve massive investment. But the co-operative venture with DAF would enable the two companies to spread the fixed cost of component engineering and development and even production over a larger output. (The co-operation involves only trucks over 3.5 tonnes gross weight and DAF produces about 15,000 a year.)

Would this be enough, though? IVECO has estimated that a group needs an annual output of at least 100,000 commercial vehicles a year to reap the full benefits of the economies of scale. And IVECO is the current outstanding example of the co-operative venture within Europe's truck industry.

It emerged in 1975 when Fiat of Italy, which already owned Unic of France, joined its commercial vehicle business with that of Kloeckner-Humboldt-Deutz of West Germany, maker of Magirus Deutz trucks. IVECO, based in Amsterdam for tax reasons, is 80 per cent owned by Fiat and 20 per cent by KHD.

The old trucking names continue within IVECO—including OM and Lancia, also from Fiat's previous acquisitions—but much rationalisation of production and of components used in the trucks has taken place in the four years since IVECO was formed.

Mr. Jacques Vandamme, new chairman of IVECO, commented: "There are too many companies making heavy trucks in Europe. There must be some more restructuring. Certain makes might disappear." Then he pointed out that "the IVECO group is open to other manufacturers who would like to join us. We have shown what we can do and we are willing to listen to any suggestions."

The pressures for restructuring of the industry are familiar. There is over-capacity and severe price competition — not *only in Europe but elsewhere* in the world.

Competition

On the other hand the truck-makers need to invest heavily to keep up with the competition and the increasing demands of legislation related to transport and environment. Mr. Sten Langenius, who heads Volvo's truck business, believes that, whereas a new truck model could look forward to 10 to 15 *years of life, this has shrunk to* seven to 10 years.

The more efficient European truck producers are each using three to four "families" of components to cover their complete ranges of trucks. Even so, volumes at the heavy end are still relatively small — hence the constant search for joint-venture projects where the cost can be shared between two or more manufacturers.

In unit terms, too, demand for trucks is on the way down because of a switch to larger vehicles, a trend apparent across Europe. Bigger trucks can carry more goods, so fewer are needed.

As a result, the two fastest-growing sectors of the commercial vehicles market in Europe are the heavier vans (about 2 tonnes gross weight) and trucks larger than 16 tonnes.

The UK-based Economic Models forecasting group suggests that both these market segments will be growing at an average annual rate of more than 3 per cent until 1984, mainly at the expense of the light truck sector (3.5 to 16 tonnes) which will decline by just over 1 per cent.

If this forecast is fulfilled, the number of trucks over 3.5 tonnes registered in Europe in 1984 would be only 245,000 compared with 272,000 in 1970 in the six major markets: West Germany, France, Italy, the UK, the Netherlands and Belgium.

As for export (in this context non-EEC) markets, most of the European groups are in the classic chicken-and-egg position. They need export sales to increase volume so as to be cost competitive with rivals in Japan and the U.S. Yet to win export sales they must have the competitive costs only volume production can bring.

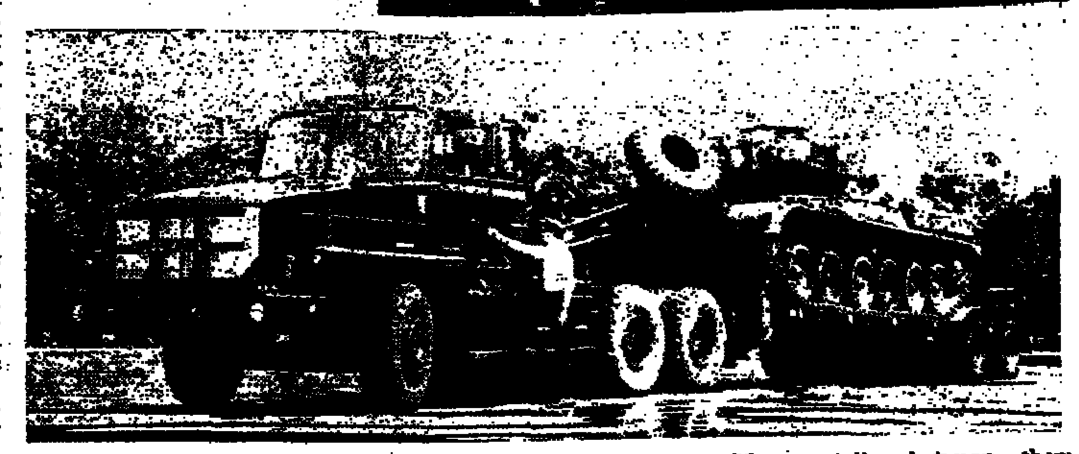
To break out from this problem, PSA has decided that Dodge and, if all goes well, DAF will form the basis of a new European group similar to IVECO. It would have a variety of product names, but draw on many common components, share some engineering and design and even some of the costs of backing up the marketing and distribution operations in some markets.

So, it is not beyond the realms of possibility that by 1999 we might see a group in which Dodge, DAF, MAN of West Germany, Leyland Vehicles of the UK and Renault Industrial Vehicles of France, for example, were linked in a kind of federal structure. Such a group would have significant shares in most of the important individual European markets (there is little to be done about a base in Italy because of Fiat's dominance and the lack of any other significant commercial vehicle manufacturer there) and be in a position to take on the strongest Japanese and U.S. competition in the developing countries and the Middle and Far East, the "neutral" overseas battlefields.

PSA's choice of DAF as the first partner took most observers by surprise. But Dodge and DAF do fit together fairly well in that Dodge is better represented in the light and medium truck sectors while DAF concentrates mainly on the heavy end.

The diverse range of commercial vehicles

These pictures illustrate the wide range of applications which commercial vehicles must cover. On the right is the Fiat Fiorino van recently introduced to European markets with some success. The picture below shows Scammell's "Commander" tank transporter for carrying tanks of up to 65 tons



Then the pressures on DAF to sort out its future plans were greater than for some other companies. It was one of the few truck makers to record a financial loss last year. (It has been making confident noises about the current 12-month however.) The group attempted to find a "friendly big brother" in 1972 when International Harvester of the U.S., one of the world's biggest truck manufacturers, took a 33 per cent shareholding.

Problems

But the two groups failed to agree about anything except they did not see eye to eye. Certainly the hoped-for benefits failed to materialise for DAF—there has been no help with product development, no truck sales in the U.S. to boost volume.

volume. But, according to Mr. Piet van Doorne, DAF's chairman, IH fully support the proposed deal with Dodge.

As for IH, it has a centre in Brussels where a team is working out *the options for Europe* where the American group still seems determined to become a significant force in the truck business. Some of the options will have to be reworked following the deal with Dodge.

For the PSA move is certainly likely to upset the "state of unstable equilibrium" in the European industry. That phrase was coined by the Paris-based forecasting group, Eurofinance, in a report published before the *Dodge-DAF deal was announced* and which pointed to three "unstable" situations in particular which could lead to structural changes—the approach PSA would take to Dodge being one of them.

The others included: Volvo and Scania, the two Swedish producers, who working together would be a powerful force in the heavy truck business in Europe. Merger talks between them broke down before (apparently personality clashes were involved) but, as the Dodge-DAF arrangement shows, other forms of co-operation are open to them.

And the Spanish truck industry—and in particular its major, and State-owned, group ENASA—has its problems. Spain is on the verge of entering the Common Market, perhaps by the mid-1980s, and will have to tear down the barriers which protect its automotive industry. Spain might be a fast-growing market but its truck manufacturers are relatively weak in European terms.

The Eurofinance report suggested that a decision in one of the three "unstable" situations would "trigger a series of moves on the structural chess board."

Now PSA has probably set the game in motion.

Ken Gooding

Motor Industry Correspondent

UK REGISTRATIONS OF NEW COMMERCIAL VEHICLES

MANUFACTURER	TOTAL 12 months ended December 1978	1977
BRITISH		
Bedford	45,926	43,047
BL Cars	50,122	43,370
Leyland Vehicles	13,584	14,033
Chrysler	12,182	10,476
Ford	69,837	69,985
Hestair Dennis	328	278
ERF	2,653	2,126
Foden	1,220	1,095
Seddon Atkinson	3,825	3,082
Volvo	—	—
Others	762	679
Total British	200,439	188,171
IMPORTED		
DAF (Holland)	1,720	1,431
Ford (Holland)	229	280
Chrysler (France)	3,889	4,185
Citroen (France)	19	77
Fiat (France)	282	100
Peugeot (France)	1,034	163
Renault (France)	2,101	1,815
MAN (West Germany)	408	330
Magirus Deutz (West Germany)	815	448
Mercedes-Benz (West Germany)	4,269	3,011
Opel (West Germany)	36	12
Volkswagen (West Germany)	8,103	5,499
Fiat (Italy)	3,466	2,619
Daihatsu (Japan)	637	—
Datsun (Japan)	7,527	4,532
Honda (Japan)	3,017	2,957
Mazda (Japan)	2,769	1,525
Toyota (Japan)	5,305	3,808
Polski-Fiat (Poland)	534	—
Roman (Romania)	28	178
Chrysler (Spain)	169	61
Ford (Spain)	3,850	—
Scania (Sweden)	1,394	885
Volvo (Sweden)	3,725	2,815
Jeep (U.S.)	175	1
Others	345	319
Total imported	55,846	37,051
GRAND TOTAL	256,285	225,222

Source: SMMT

Who's who among the manufacturers . . .

EUROPE HAS a strong and thriving commercial vehicle industry. *The following list is* by no means exhaustive but gives an indication of the shape of some of the groups.

● **Daimler-Benz** of West Germany is the world's biggest heavy truck producer but it has a full range of commercials down to the 2.5 tonnes gross weight level. In 1978 is produced about 240,000 commercials of which 66,600 were assembled in Latin America. All the Continental European commercial vehicle assembly plants are in Germany: Woerth on the Rhine makes the over-six-tonnes trucks; Dusseldorf is responsible for the medium range of 3.5 tonnes to 6 tonnes trucks while smaller vans are currently assembled at Bremen. It is estimated that roughly half the group turnover of DM 27bn (£6.75bn) and half the 135,000 employees are accounted for by the commercial vehicle business.

Daimler-Benz is engaged on a DM 10bn (£2.5bn) investment programme between 1978-83 to expand the product ranges and increase capacity for both cars and commercials. Among the important changes will be a switch of production of light vans from Bremen to Dusseldorf.

● **Dodge** — the commercial vehicle business which PSA Peugeot-Citroen acquired when it bought the European operations of Chrysler at the beginning of this year. The previous parent group instigated a project to give the UK and Spanish truck operations a separate, European identity. This started in 1976 and is close to fruition. Dodge made 14,390 trucks last year and expects this figure to reach around 20,000 in 1979. Assembly plants are at Dunstable and Luton in England and Villaverde, near Madrid, in Spain. A further 7,500 Dodge Spacevans (light commercials) were manufactured in 1978 and the total should reached 10,000 this year.

PSA's plans for the company were made clear early this month. The French parent said it intends to retain and develop Dodge. As a first step towards building it up, talks are going on about a possible technical and manufacturing agreement with DAF Trucks of Holland.

● **Ford of Europe:** In a normal year Ford of Europe produces about 200,000 commercial vehicles. This year, as the group makes up for losses caused by the 1978 strike, output could reach a record 250,000 Production is heavily biased towards the lighter end of the market and Ford claims the Transit van is the best-selling single commercial vehicle model in Europe. The Transit is assembled at Ghenk, Belgium, Amsterdam, Holland and *Southampton, in the UK.* The heavyweight Transcontinental trucks are made at Amsterdam, the "A," "D" and "R" series trucks at Langley, UK, the Escort vans at Halewood, UK, and the Fiesta vans at Valencia, Spain.

Commercial vehicle production is such an integral part of the total business that Ford does not split out either turnover figures or employment totals. The group is not quite mid-way through a £400m, five-year investment programme for the trucks business. Some of this went to set up the marketing, design and engineering centre for Ford Trucks Europe at Basildon, UK, which brought together 1,100 people.

Growth

● **General Motors—Bedford:** When GM reorganised its European operations in the mid-1970s it handed Bedford in the UK *the responsibility* for the European truck business. Last year commercial vehicle sales reached 115,537 units, including 58,700 exported from the UK (of which 54 per cent—32,000—went to Continental Europe). Like Ford, Bedford does not isolate turnover or employment figures.

Bedford plants are at Luton, for light vans, Dunstable, and Ellsemere Port, for the Chevan, in the UK and a plant at Lisbon, Portugal, assembles kits exported from the UK, mainly for the *Italian market where Bedford* has had significant recent success.

Vauxhall, GM's car subsidiary in the UK and Bedford's parent, has a £90m expenditure programme and about half is for the commercial vehicle business. This includes an £8m streamlining of the Dunstable truck facility aimed at smoothing heavy truck production in particular.

● **IVECO** — the Industrial Vehicles Corporation — was formed in January 1975 and brought together the commercial vehicle interests of Fiat of Italy and Magirus-Deutz, the subsidiary of Kleckner-Humboldt-Deutz of West Germany. Fiat had already put together a commercials group including Unic in France and OM and Lancia in Italy. Fiat has an 80 per cent shareholding in IVECO and K-H-D 20 per cent. The new group has 16 plants, eight of them in Italy, four in France and four in Germany, and 50,000 employees.

It has been reorganised so that light vehicles are made at Brescia in Italy, medium duty vehicles at Trappes in France, heavy duty road vehicles at Turin, construction equipment at Ulm and buses and coaches at Cameri in Italy and Mainz in Germany. Chassis are made in *Turin.*

In 1978, IVECO sold 109,000 vehicles. Turnover was $3.26bn (£1.45bn). Of this turnover, Fiat accounted for $1.92bn, Magirus-Deutz $902m, Lancia $12m and Unic $42m. Of the vehicles sold, 12.3 per cent went to Germany, 38.9 per cent to Italy and 9.6 per cent to France. Some 12 per cent went to other Western European countries.

● **Leyland Vehicles** is the truck division of BL, the State-owned British automotive group. It has around 25,000 employees and this year sales will reach around £500m. The company has the capacity to produce 57,000 trucks a year but last year disputes cost 11,000 units and output was under 47,000.

After years when the company was starved of investment funds because of the car division's troubles, investment is now going ahead quickly. Capital spending last year reached £40m and this year it will be about £50m.

Among the important projects are a new £33m technical centre at Moss Side, near the main plant at Leyland, Lancashire, where the test track should soon be in operation; the £17m modernisation of the parts division at Chorley, near Preston, also due to be completed early next year and a new £31m assembly hall at the Leyland facility.

● **MAN** — Maschinenfabrik Augsburg-Nurnberg — is West Germany's second-largest truck maker. It is 75 per cent owned by GHH (Gutehoffnungshuette), Europe's largest engineering group, and has diesel engine, printing machinery and mechanical and structural engineering interests as well as truck and bus manufacture.

Turnover of the truck and bus operations last financial year (to June 30) remained at about the DM 3bn (£750m) level in spite of a drop of DM 200m (£50m) in deliveries to the German army as expected under the terms of a four-year contract.

In unit terms, MAN delivered around 21,500 vehicles including 3,000 army trucks and 2,500 buses. The group is involved in a DM 40m (£10m) rationalisation programme which will switch heavy truck manufacturing to Munich, bus assembly will be transferred to Salzgitter from Penzberg, which will be converted into a component manufacturing plant. The Salzgitter plant will assemble the new joint truck range being produced with Volkswagen.

● **Renault Vehicules Industriels** is, as the name suggests, the commercial vehicle business within the State-owned Renault group of France. It has 20 plants, ten in France itself, and employs 35,000 people. Output is in the region of 60,000 a year (including those vehicles assembled under licence in Africa, the Middle East and Asia).

RVI was formed in 1975 when Renault's existing subsidiary, Saviem, was merged with Berliet, up to that time owned by Citroen. (Citroen's car business was absorbed by Peugeot at the same time). *Rationalisation has been slow* but steady and during the process RVI has experienced substantial losses. The group hopes to at least break-even in 1980. But the losses have led to a FFr 5bn (£526m) five-year investment programme launched in 1977 being trimmed.

● **Scania** — the badge carried by the trucks produced by the Saab-Scania group of Sweden. The Scania bus and truck division accounted for SKr 6,121m (£651m) of Saab-Scania's total turnover of SKr 11,642m (£1.24bn) in the last financial year. To put this into perspective, Saab's car division had sales of SKr 3,653m and the areospace interests of SKr 1,114m.

The truck and bus division, with plants in the Netherlands, Brazil and Argentina, as well as Sweden, employs 21,300 of the group's total workforce of 39,250.

Output in unit terms was 21,300. Truck plants are at Södertalje, Sweden, Zwolle, Northern Holland, and Latin America (San Paulo and Argentina), Tanzania and Iraq.

● **Volvo** of Sweden, like its neighbour, also has a car business but in Volvo's case car sales far exceed those of trucks. Car turnover in 1978 was SKr 10.26bn (£1.09bn) compared with SKr 4.83bn (£514m) for trucks, SKr 455m (£48.4m) for buses and a group total of SKr 19.13bn (£2.04bn).

The group produces more than 25,000 trucks a year and around 2,900 buses. Plants are located at Gothenburg, Sweden; Ghenk, Belgium; Irvine in Scotland; in Peru, Australia and Malaysia as well as those owned by importers in Portugal and Morocco. It is to set up a £65m plant in Brazil together with local investors and this will come on stream in 1980.

The group is spending between SKr 2,500bn to SKr 3,000bn (£266m to £320m) to further develop its range of trucks. All the current Volvo trucks have been on the market under five years thanks to a previous SKr 1bn (£116m) investment programme.

Ken Gooding

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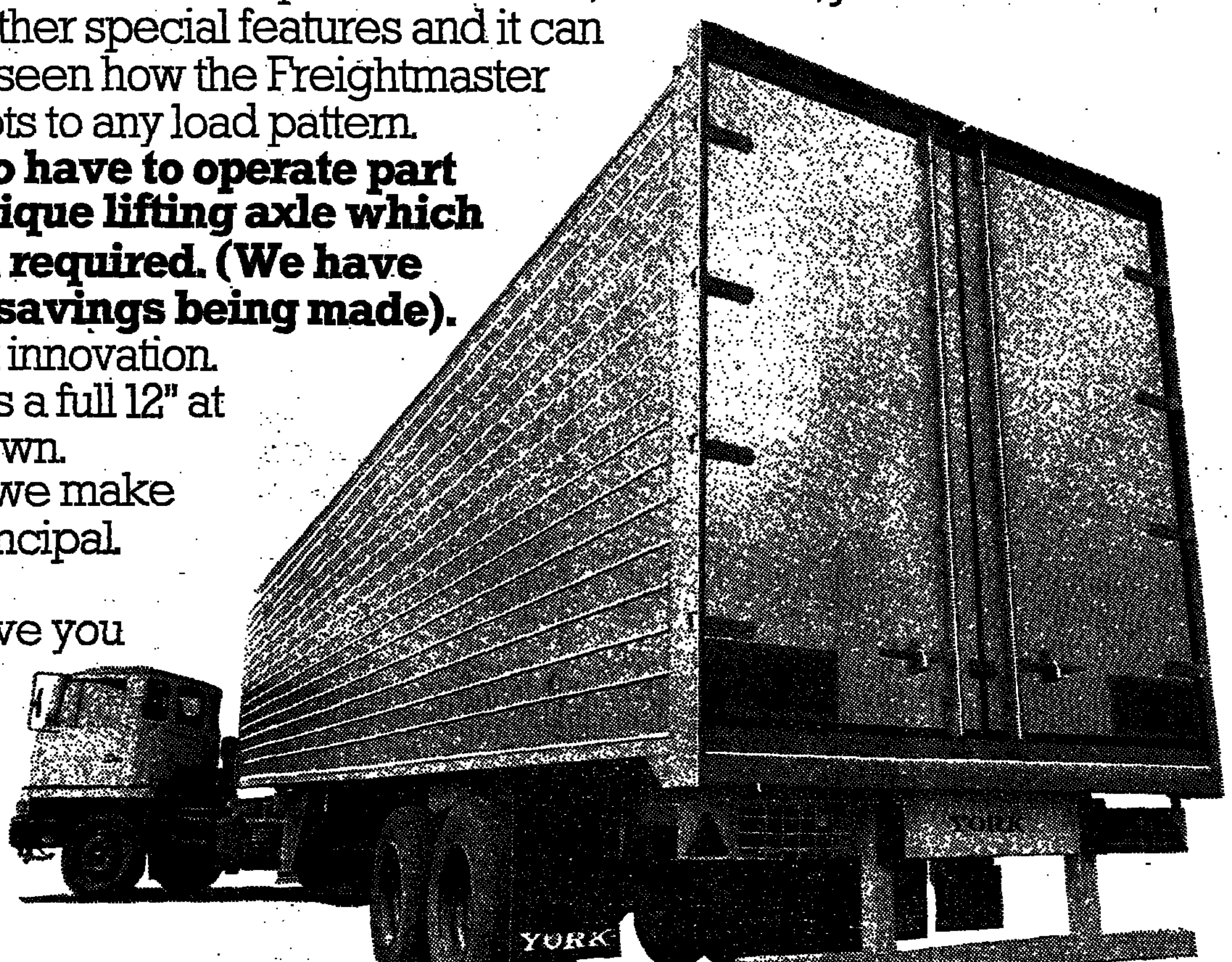

FREIGHTMASTER.

Some improvements in W. German market

SOME IMPROVEMENT in West Germany's commercial vehicle industry is today feeling a good deal more comfortable than it was a year ago. Demand is picking-up once again after two relatively lean years.

During the first seven months of the year output of commercial vehicles totalled 187,000 units—11 per cent up on the 168,448 units produced in the comparable period of 1978. Growth has considerably outstripped performance in the car sector where output during the same period increased by only 3 per cent.

Even so, most of the growth has been in the domestic market. Overseas *demand has stagnated*—a worrying prospect for an industry which traditionally sells more than 60 per cent of its production abroad.

According to Verband de Automibilindustrie (VDA), West Germany's motor trade association, the proportion of the industry's production shipped overseas has been steadily declining since 1975. In 1974, for instance, 66.7 per cent of all commercial vehicles built in the Federal Republic were exported.

However, in 1975 the figure dropped to 63.8 per cent. It rose a little in 1976—a result of massive orders from the Middle East—but in 1977 fell back to 60.1 per cent. Last year it dropped to 57.1 per cent.

In volume terms, the industry's exports have stagnated since 1973 at about the 175,000 units. The exceptions have been 1976 and 1977 when the industry felt the benefits of investment boom which followed the heavy increase in OPEC revenues.

It seems clear that the West Germans have been affected by the major problem affecting the European commercial vehicle industry as a whole — overcapacity. As Mr. Jacques Vandamme, chairman of IVECO, said a few months ago: "There are too many companies making too many trucks."

The relentless upwards movement of the Deutsche Mark against the other major world currencies has also caused problems. For instance, West German wage costs are among the highest in the world.

According to the VDA, wage costs per man-hour last year were DM 24.44 ($13.48). This is only a share below Belgium's DM 24.78 per man-hour ($13.67), but well about the DM 21.50 ($11.86) paid in the U.S. and the DM 9.54 ($5.26) average by the British motor industry.

Furthermore, the room for improving productivity per man is limited, in comparison with other countries, by relatively short working hours put in by *German* workers. Holidays in West Germany are long — five weeks a year on average — and getting longer.

In 1977 the average German motor worker put in 1,750 man-hours. This compares with an average of 2,100 man-hours in the U.S. motor industry, 1,847 in Britain, even allowing for strikes, and 1,790 in France.

However, the West German commercial motor industry has fared by no means badly during the past few years when one compares its performance with its competitors in other countries. It has done so by heavy investment in rationalising its production and on model development.

As in the car industry, the motor manufacturers have concentrated on technological advance. Design, technical innovation and the quality of their products have offset the declines in price competitiveness resulting from the increasing strength of the Deutsche Mark.

Furthermore, there has been a marked increase in the German manufacturers' direct presence in overseas markets. This has taken place quietly, even stealthily. *And, to-day, it is fair to* claim that the German motor industry — the commercial vehicle makers included — are truly multinational.

Giant

Daimler-Benz, the giant of the commercial vehicles sector, for instance, has truck manufacturing plants in Argentina, Brazil, Spain, Yugoslavia, Turkey, South Africa and Iran. There are also assembly plants *in 30 other countries.*

Maschinen-Fabrik Augsburg-Nurnberg (MAN) is also assembling abroad with plants in South Africa and Australia. It also has a 30 per cent stake in a manufacturing plant in Turkey—perhaps not the happiest place for investment as the present time, but one which holds considerable long term promise.

Many observers would probably argue that the most momentous event in the German motor industry's overseas operations in the past few years was Volkswagen's decision to start building its cars in the United States. However, scarcely less important was the news that Daimler-Benz is to start assembling commercial vehicles in the U.S. from 1980 onwards.

Daimler-Benz is going into the U.S. with a range of nine to 14 tonnes commercial vehicles all powered by diesel units. Initial production will be 4,000 units a year, rising to 6,000 units in 1981. The vehicles will be assembled from semi-knocked down kits shipped in from its Brazilian facilities.

Daimler-Benz now ships about 2,500 commercial vehicles in this class to the U.S. from Brazil. And, while the $6.6m investment in the project seems modest by Daimler-Benz standards, it is in fact a serious assault on a rapidly expanding market.

U.S. commercial vehicle operators are still heavily geared towards petrol-engined vehicles. For instance, total sales in the nine to 14 tonnes class in the U.S. last year amounted to 145,000 units of which only 10 per cent had diesel power units.

There is a strong lobby in the U.S. against the diesel—an unholy alliance, some observers say, between the U.S. truck makers, eager to keep out foreign competition until their diesel units are fully developed, and environmentalists who blame the diesel for a range of *illnesses from bad breath* to cancer. But, even so, high fuel costs as a result of the energy crisis are expected to encourage rapid market growth.

By the mid-1980s diesel units are expected to power between 30 and 40 per cent of the estimated 200,000 vehicles sold every year in the nine to 14 tonnes class. Daimler-Benz is clearly aiming to pick up a substantial slice of this market.

Initially, only a small proportion of its 175,000 square metres Hampton-Newport News, Virginia, site for its U.S. assembly facility will be used. There is plenty of room left for further expansion.

The reasons for the Daimler-Benz decision to import kits from its Brazilian works illustrate the problems that German commercial vehicle builders face in highly priced competitive markets such as the U.S. An 11-tonne truck costs about $16,000 in the U.S. market while in Germany the price would be getting on for 50 per cent higher. Technical excellence alone cannot offset such a price differential.

West Germany's multi-nationalism in the commercial vehicle field shows that this has come as no surprise to the industry. Indeed, the stagnation of the West German industry's export sales has to a large degree been matched by increased overseas production.

But despite price problems in the U.S. market, West Germany's commercial vehicle builders are more than holding their own in Europe. Indeed, competition from the Federal Republic is increasing.

Early in September Volkswagen and MAN formally unveiled their new joint commercial vehicle range in which they have invested DM 100m ($54.8m). The two manufacturers predict sales of 15,000 of the six- to nine-tonne vehicles a year.

The two groups are aiming for a 40 per cent slice of the West German market for commercial *vehicles of this size.* They are also hoping to capture 10 per cent of total European sales and generate an annual turnover of *DM 400m* with the new range.

Both groups will assemble the jointly-produced vehicles—MAN at its Salzgitter plant and Volkswagen at its Hanover factory. VW is making the cabs, rear axles and gear boxes, while MAN is producing engines, frames, front axles and special bodies.

The new series enables the two groups to offer a full range of commercial vehicles from two tonnes to 200 tonnes. To ease the marketing of the new vehicles the VW commercial vehicle and M.A.N. truck importing operations are being combined throughout Europe.

Guy Hawtin

French producers losing ground

SINCE THE accession of the present French Government three years ago, there has been only one basic trend in the French commercial vehicle industry. It has steadily lost ground, held back by the poor market conditions produced by the austerity policy designed to reduce inflation and defend the franc.

Quite apart from the declining market, however, the French have been hit by two other factors. First, the country has embarked on the long overdue measures to rationalise the domestic industry by bringing together Berliet, the former Citroen subsidiary, and Saviem, the Renault affiliate.

Second, foreign manufacturers have begun to press harder into France, helped by more up-to-date ranges and aggressive, cut-price marketing policies.

The effect of these two pressures has been to consolidate the position of the importers *still further. This development* has been particularly marked in the heavier vehicle categories which have become steadily more important in the overall commercial vehicle market in recent years. Daimler-Benz, for example raised its sales in the first five months of this year to 6,254 units compared with 5,088 in the same period a year ago. Volvo's registrations have gone up from 1,271 units to 1,586 in the same period, and Scania's from 418 to 633.

Prospects

The French industry has little hope of recovering the lost ground this year. It is forecast that the total market for vehicles of more than five tonnes will come out at just over 40,000, roughly the same figure as in 1978. This means that registrations have dropped back to the level of 1967, some 13,000 units below the boom figure of 53,000 units sold in 1972. Over the first five months of this year the market for vehicles of this type dropped by 2.6 per cent to 22,742 units against 23,354 a year ago.

For Reanult Vehicules Industriels (RVI), the group which now embraces Berliet and Saviem, these poor market conditions spell out a continuing period of constraints. It has reached a point at which it has to hold prices in its home market in the interest of reducing its already sizeable losses. But this policy inevitably means that its market share comes under increasing pressure from overseas competitors, who can afford more elastic pricing policies.

In addition, RVI has been facing the problem of rationalising its dealer network by bringing together the Berliet and Saviem outlets in France. Although this process has been achieved with the loss of only three concessionaires, out of a current total of 192, it has opened up further opportunities to competitors anxious to pick up sales outlets in France.

RVI's problems are amply illustrated in its figures for last year which show an all-round loss of market share. In the lighter vehicles of 2.5 to 5 tonnes, the group's sales in *France were down* 13.2 per cent to 8,800 units, and in heavier weight vehicles by 12.8 per cent to 19,000. RVI's sales held up only in the tractor unit sector of the heavy duty lorries, where it registered virtually the same number as in the previous year at 6,000 units.

This year's statistics tell a similar story. In the sector of less than six tonnes, Berliet and Saviem's combined sales fell from 4,201 in the first five months of last year to 3,882 in the same period of *1979.* In the heavier weight of vehicles, the figures dropped from 8,034 to *7,277.* The group now has a market share of about 45 per cent in these heavier weight vehicles in France, and production is still falling from the low figure of 49,000 reached last year.

Berliet's output, for example, dipped in the first six months of this year to only a little over 9,000 units compared with 9,840 a year ago, while Saviem's has been cut back from 17,300 to 11,900.

The second French truck producer, UNIC, has suffered less than RVI from the prevailing market conditions, managing to increase its sales in France so far this year. In the smaller category vehicles of less than 6 tonnes, registrations went up from 363 units in the first five months of 1978 to 1,515 in the same period of this year, while in vehicles of more than six tonnes they have increased from 2,722 units to 2,848. UNIC's output, however, dropped slightly in the first six months from 10,097 a year ago to 9,438.

UNIC, as with Renault, is clearly faced with difficulties in creating a profitable enterprise in a market as sluggish and over-supplied as France at the present time. But its overall position is less dependent than RVI's on the French position. The group is a subsidiary of IVECO, the pan-European truck manufacturing group controlled by Fiat, and as such its policies are dictated by the needs of the whole group. Vehicles are imported and exported depending on IVECO's overall market strategy in Europe.

Under the IVECO reorganisation plan launched about 5 years ago. UNIC was chosen as the manufacturing centre for the company's medium-range vehicles weighing between 11 and 16 tonnes.

Although it still makes a few lighter trucks, it has already slimmed down and rationalised its range to concentrate on this medium weight sector. Some FFr 300m have been pumped into a new factory at Trappes, near Paris, which has a capacity of about 25,000 units a year.

Problem

With UNIC's main new investment now in place, the future size and performance of the French commercial vehicle industry clearly depends on RVI's ability to create a flourishing business out of the former Berliet and Saviem organisations. The group's problem is that it came late to this point of restructuring, well after the *other* big European groups, Mercedes-Benz and IVECO, had made their strategic decisions and had also made a lot of their key investments in new models. The French company is now having to rationalise at a time when its results cannot be cushioned by healthy market conditions.

Thus, RVI has recently had to shed some 1,800 workers in redundancy *programmes* which it had hoped to avoid in the expectation of more buoyant conditions. This means that between 1977 up to the end of 1980 it will have shed some 5,000 employees to bring its total workforce down to about 36,000. As a result of these swingeing cuts, RVI expects to register an improved financial performance this year. But it is likely to remain heavily in losses, even if it manages to reduce the net loss of almost FFr 400m of last year which was made on a turnover of FFr 8.6bn.

Given these financial problems, the group has had to streamline its investment objectives more precisely than it might have hoped to do in a period of essential rationalisation and reorganisation.

Nevertheless, the sales network has already been brought together in France, and two key product investment areas singled out. The first of these is for a new light weight vehicle, the so-called "F" range, to be built at the Batilly factory and due to be launched this year. This will compete in the all-important urban delivery sector of the market, which has encouraged the development of several other new products by

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Success for Swedish manufacturers

OTHERS MAY falter but the Swedish heavy truck-makers chug undramatically and steadily ahead, doggedly expanding their markets and contributing handsomely to their group earnings. Not even the loss of its Iranian operation—closed down by the new regime—has halted the sales growth of Volvo trucks, while Scania, having reported another record year for exports in 1978, has successfully compensated for the decline in the South American markets by increasing deliveries to Iraq and Africa.

The Swedish formula is by now well-known. They are concentrated in the heavy end of the market, building expensive, specialised models which offer both reliability and long life. Continuous product development is important but anothother essential element in their success has been the effective marketing organisations with their solid back-up services.

Total Swedish output of trucks and buses declined marginally last year by about 240 vehicles to 51,278, according to the Automobile Industry and Automobile Wholesalers' Association.

Saab-Scania reported a decline of 350 to 21,300 vehicles while Volvo's output of trucks and buses for the year settled at 26,700 compared with 28,100 in 1977.

Sales, however, recorded further substantial value increases, both manufacturers being able to offset the weak demand from the domestic market by boosting exports. Volvo sold 28,000 trucks and buses during the year while Scania's deliveries equalled its production of 21,300 units. Volvo boosted its sales value from SKr 4.5bn to SKr 5.3bn (£558m, $1.3bn). Total income from the sale of Scania's products (including extra diesel engines) climbed by 19 per cent to SKr 4.67bn.

The truck and bus operations were the major contributors to profits in both groups. In Volvo they are estimated to have accounted for around 80 per cent of the pre-tax profit while, allowing for the losses Saab-Scania continued to make on its car, computer and some other operations last year, Scania's earnings probably exceeded those of the group.

In its annual report Saab-Scania stated that the pre-tax return on total capital employed had improved from 11 per cent to 12.7 per cent for its trucks, buses and cars combined. Using a somewhat different measure Volvo showed an unchanged profitability of 11 per cent for its truck and bus operations.

Both the Swedish manufacturers now export close to 90 per cent of their output. From their base in the Nordic market, which they dominate, they have to aim at a deeper penetration of foreign markets than any of their competitors with the exception of Daf in the Netherlands. Their performance last year on a fragmented but generally bearish European market was thus a demonstration of strength. Scania raised its deliveries by 12 per cent to 7,300 vehicles while Volvo sold 11,700 trucks and buses, 1,400 more than in 1977.

Within Europe, Volvo and Scania last year held third and fourth places behind Mercedes Benz and IVECO in deliveries of heavy trucks, but ahead of the new French constellation, Renault Vehicles Industriels.

Mr. Ingvar Eriksson, head of Scania, writing in a company magazine recently, carried out the interesting exercise illustrated in the accompanying table. This shows the manufacturers' penetration of other European markets, excluding their domestic market. By this computation, Volvo with a 9.4 per cent share and Scania with 7.8 per cent, outstripped both Mercedes and IVECO. Well over half Mercedes' sales of heavy trucks go to the domestic German market, while Fiat, the largest partner in the IVECO group, sells over 90 per cent of its heavy truck output in Italy. Scania alone actually manufactures more heavy vehicles a year than the entire British industry or the French manufacturers combined.

Partners

Some 42 per cent of the Swedes' truck and bus exports went to the EEC countries last year, with a further 23 per cent going to Sweden's EFTA partners, which include its Nordic neighbours.

However, both Volvo and Scania have been spreading their risks during the 1970s, moving into likely markets outside Europe — not least the U.S., where Volvo's co-operation with Freightliner is one of the more interesting experiments.

Volvo is not marketing its long-haul vehicles there, but the agreement with Freightliner will eventually give its distribution vehicles — produced at Ghent in Belgium — access to some 200 dealers across the States. Volvo has overcome certification problems and has been shipping vehicles to the U.S. for the past two months, to ensure that a reasonable stock is available. Training and service back-up facilities have been completed and Volvo will be offering its trucks through Freightliner's major dealers this year.

Overall demand in the U.S. has been falling but the trend away from petrol-driven to diesel-engined trucks will, it is hoped, favour Volvo. The Swedish company hopes to double sales this year but the real test will come in the 1980s.

Mr. Bertil Krook, the truck and bus division's marketing director, acknowledges that the declining dollar rate can undermine the profitability of Volvo's American venture but the company argues that the U.S. market has such enormous potential that it will be worthwhile to sell at the market price and take the currency loss as an investment cost.

The strategy is similar to that adopted by Volvo in the U.K. where it invested heavily while sterling was weak and is now doing extremely well. Britain is the biggest single country for Volvo truck sales, ahead of France and Sweden, even though during the first seven months of this year Volvo's share of the British market for trucks over 16 tons declined from last year's 12.7 per cent to 10.8 per cent.

Another new venture which will get under way this year is Volvo's new plant at Curitiba in Brazil. The manufacturing and marketing of buses is scheduled to start before the end of the year with trucks following in 1980. The plant is planned for an annual output of 6,000 trucks and buses when fully operational and, although demand for trucks of the size offered by Volvo declined last year as the Brazilian economy went through recession, the company's strategists expect the market to continue to grow.

Volvo's push into Brazil challenges Scania and demonstrates the sharp competition between the two Swedish manufacturers. Saab-Scania already has a truck and bus operation in the country and suffered a setback last year, when it invoiced only 3,447 vehicles, more than 1,000 less than in 1977.

Project

Scania may be said to have retaliated by moving this year into a Volvo preserve, Morocco. It has agreed with Cogespar SA to set up a joint assembly and marketing company for Scania trucks and buses on the outskirts of Casablanca. This is due to become operational next autumn with an initial output of 300-400 vehicles a year.

But Scania's main recent successes in market penetration have been in Africa. In July it started delivery of an order for 675 trucks, 50 buses and 150 bus chassis from Angola. This order includes the construction of two service workshops. Last year Scania negotiated a contract with the Tanzanian national development corporation for the construction of an assembly plant outside Dar Es Salaam. This project should be ready in 1980 and will eventually have an annual capacity of 1,200 chassis.

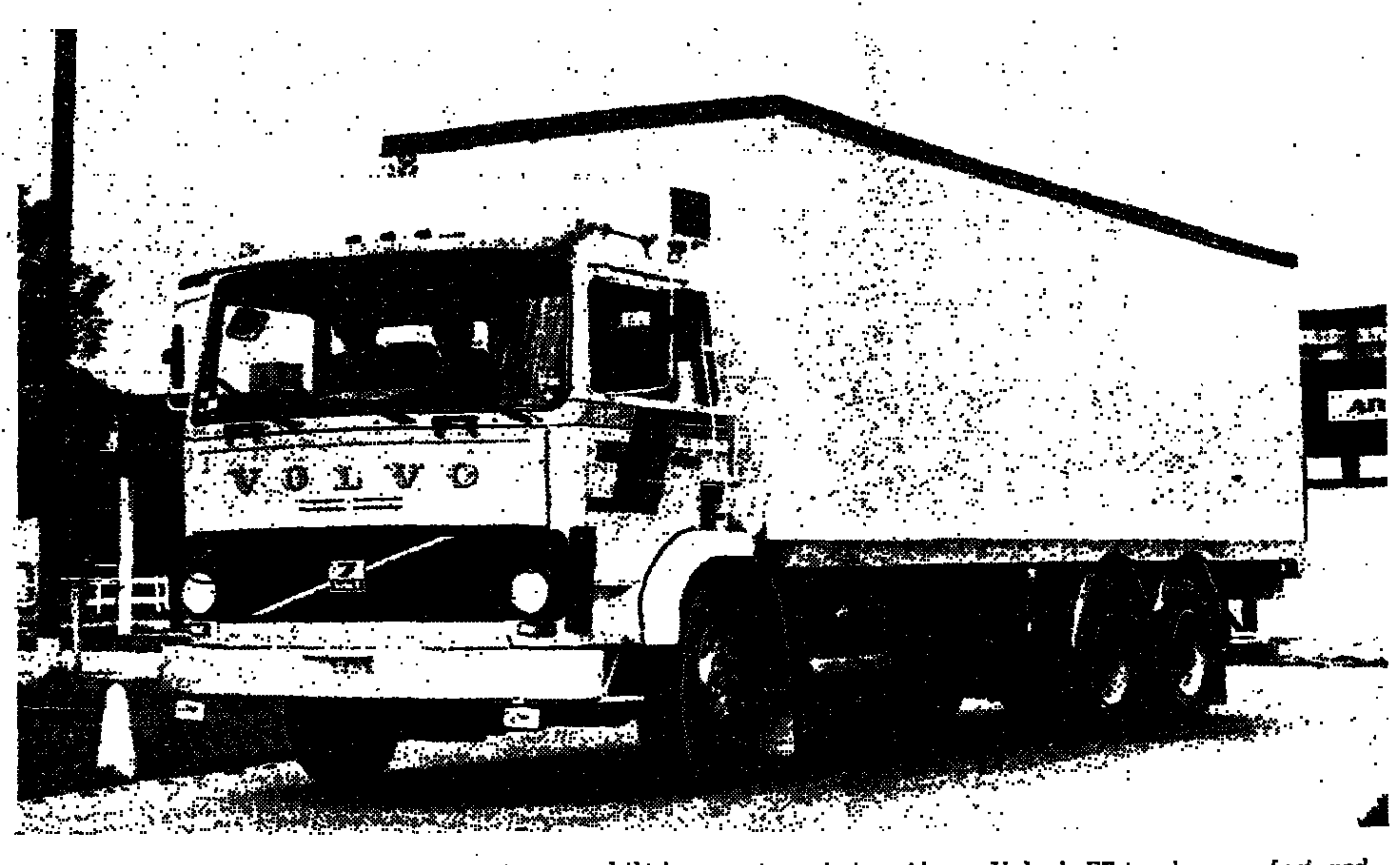
When it announced the Angolan and Tanzanian orders, Scania stated that it would have to take on a further 500 workers at its Södertälje works, in order to complete them. Volvo, too, has been recruiting fresh labour in the Gothenburg area and suffered from production bottlenecks last year. It recently admitted that sales increases were steadily building up the pressure on its production apparatus and the Volvo Board is expected shortly to decide about extending capacity in Gothenburg.

The plan for merging Volvo and Saab-Scania launched in 1977 has now been abandoned. The truck managers on both sides were opposed to it and the troublesome car divisions have now adopted quite different strategies to solve their problems. Does this mean that the Swedish manufacturers will be too small for the truck market battle which appears to be building up in Europe?

Mr. Krook sees no problems in the medium term: "There is no need to think in terms of merger as long as we can make profits and pay for our development."

Both companies have good positions on export markets, which are strategically spread. They have built up effective sales networks and they have the resources to continue their product development.

William Dullforce



Sweden's heavy truck makers continue to expand their export markets. Above: Volvo's F7 truck, manufactured at the company's Irvine, Scotland, plant. The F7 has been awarded the "Truck of the Year" title for 1979 by "Truck" magazine

French producers

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European manufacturers recently.

The second investment area will be in a new heavy-weight engine to be produced at the Berliet factory near Lyons to power the whole of the new combined heavy range of trucks.

The object of these developments is to start the move towards an integrated product range which will be gradually modernised throughout. Saviem, for example, currently imports heavy engines from MAN, the West German commercial vehicle company; these type of units will eventually be supplied from inside the group. The "F" truck will be a common vehicle, and later new products can be expected to be the same, carrying the RVI name. Even the Berliet and Saviem products are now being treated as common products; the Berliet tractor cabs, for example, are being sold as Saviems, while the Club of Four Saviem truck is being marketed as a Berliet.

While these product reorganisations are being put in place, RVI is attempting a new direction in its export effort. On this front too, it is suffering from its inheritance—an over-dependence, in this case, on the African market at the expense of other areas and particularly Europe. The group's tactics now are to tackle Europe in particular, hitting back into the home markets of its big competitors in France, much as the French car companies have done so successfully in the last 10 years.

These efforts are beginning to make some impact. West European sales went up last year by almost 4 per cent to 5,940 units. The group was particularly successful in Italy, with a market share of almost 8 per cent on sales of some 2,700 units, and in Belgium with a little over 6 per cent of the market. But it clearly still has a long way to go, particularly in the all-important West German market (which is so difficult to break into) and in Britain.

In the longer term, however, RVI will be highly dependent on a turnround in the French market, since it is basically here that it can build up its profits base. As yet, this hoped-for change is not in sight. Government plans for a deficit budget next year are not expected to give more than a gentle boost to growth, whereas what the industry needs at the moment is a positive upturn in industrial confidence and output.

Terry Dodsworth

Declining demand in Spain

COMMERCIAL VEHICLE sales and production have been an accurate barometer of the recession that has hit Spanish industry. The rapidly expanding domestic market of the late 60s and early 70s has given way first to a levelling off of demand, then stagnation and now decline.

The recession which first began to be felt two years ago has bitten much deeper than expected. It has also lasted much longer than expected. This year the Spanish economy was projected to grow at around 4 to 5 per cent. But now this forecast has been halved and manufacturers are revising downwards production and sales projections, with no firm indication of when they are going to see any light at the end of the tunnel.

The worst affected sector has been that of commercial vehicles over 12 tons. Here there has been a steady but accelerating drop in demand over the past year. This has been especially noticeable after April when overall truck sales slumped 49 per cent compared to the same period in 1978. The accompanying table shows that in the first six months of 1979 the drop in total sales, both domestic and foreign, was 11 per cent in the heavy vehicle sector. However, once the export component is removed the drop is much more significant.

Recession

The picture could alter further and more negatively before the end of the year. Not only is the recession unlikely to bottom out but the competitiveness of exports is being eroded. For instance, last year light commercial vehicle exports increased 36 per cent. But the peseta has appreciated so strongly that orders are now becoming increasingly hard to obtain.

The competitiveness of Spanish products after the 25 per cent devaluation of July, 1977, was a principal cause behind the manufacturers ability to switch to spare capacity to exports, thus offsetting slack domestic demand. Now the peseta has regained its pre-devaluation parity.

At the same time there has been a cumulative impact of increased overheads in the past three years, now making itself felt. During this period industrial overheads have risen at almost three times the European average, and this year, too, they will also be above the European norm.

The net result of all this is that the manufacturers have excess substantial capacity, especially at the heavy industrial vehicles end. Enasa is operating at some 60 per cent of capacity; stocks meanwhile are accumulating. Moreover, these stocks and under-utilised capacity have to be financed in a poorly developed financial system—and at a time when the Government is operating a tight money policy.

It hardly needs to be emphasised, therefore, that the commercial vehicle manufacturers are facing tough times.

Against this background major changes in the structure of the industry are being considered—indeed, are inevitable. The most outstanding feature of the industry has been its traditionally protected nature and the efforts by the Spanish Government to sustain a Spanish presence in a field dominated by multi-nationals.

However, the Government is committed to liberalising the economy in preparation for Spain's entry into the Common Market—and the automotive sector has been one of the first where restrictive legislation regarding the percentage of foreign ownership and the import of components and completed units has begun to be liberalised. This is the chief underlying forte behind the changes.

Eansa is the only Spanish-owned company of significance. Enasa, producing trucks and buses under the Pegasos label and light vans under the Sava name, is mainly owned by the large banks. Until 1973, British Leyland held a 25 per cent stake but was bought out—the intention being to make it a truly Spanish group, diversifying into exports and developing its own technology. Meanwhile, the other major manufacturers all have foreign stakes in differing proportions—Chrysler was 99 cent owned by its U.S. parent before the Peugeot deal—Motor Iberica is 36 per cent owned by Massey-Ferguson—and Mevosa is 41 per cent owned by Daimler-Benz.

Losses

Enasa is unlikely to survive in its present form much longer. The company is losing money and is in no shape to face up to liberalisation of the Spanish market. Last year it lost £40m and this year losses are expected to be about the same—possibly even more.

Enasa has been affected by the entry of Chrysler's Dodge range of vehicles. But it also happens to be operating mainly in an end of the market that is particularly affected by recession. For instance, because safety norms and age regulations on vehicles are virtually non-existant, replacement does not occur as regularly as in EEC countries.

Because its financial structure is weak, Enasa finds it hard to finance exports (a 500-truck order was lost to Egypt because of this). Dealers also do not have the financial backing to offer good trade-in prices. This is in addition to problems like debt-ridden municipalities not paying for bus purchases.

There are two basic solutions to Enasa's problems. The first involves the sale of either all or part of the company to a multinational group. Conversations have been held in this respect with Fiat (Iveco), Berliet and a feeler was put out to Chrysler before last summer's sale to Peugeot.

But no decision has been reached, and certainly the trade unions dislike the idea of the State selling out its stake to a multi-national. Yet a multi-national will want control.

The second solution involves a concentration of existing Spanish companies, probably with the presence of a foreign partner. Last year there was talk of merging Mavosa with Enasa—INI already possessing 24 per cent stake in the former, but Daimler Benz reportedly was against the move.

COMMERCIAL VEHICLE SALES IN SPAIN

Company	Jan.-June 78	Jan.-June 79
Domestic/foreign, up to 12 tons		
Enasca	7,021	6,674
Motor Iberica	13,925	13,939
Chrysler	2,302	2,149
Mevosa	6,877	6,921
Others	7,761	8,380
Total	37,895	38,063
Vehicles over 12 tons		
Pegasos/Enasa	2,498	2,197
Motor Iberica	501	410
Chrysler	2,311	2,149
Hotal	5,310	4,756

More recently, INI prepared a study on the possible compatibility of Enasa and Motor Iberica—a group which has a reputation for aggressive commercialism. Motor Iberica manufactures tractors, agricultural equipment, construction machinery, Ebro trucks and buses. The study concluded that there was sufficient compatibility to consider in greater depth a form of co-operation or merger.

One suggestion is that INI buy out Massey-Ferguson—a move the latter would almost certainly accept. But this still avoids the question of the competivity of such a purely Spanish company.

Ultimately, the fate of Enasa depends upon the willingness of INI—and by the same token the Government—to plough money into the company. By inclination INI would prefer to see Enasa linked to an international partner.

But the issue is far from resolved. It is likely to be the major theme in this sector over the coming year, closely followed by the fate of Mevosa.

Negotiations are taking place for Daimler Benz to acquire control. At one stage, Daimler Benz was interested in a hiving off of Enasa's light commercial vehicle side to mould into Mevosa. It is not clear whether this proposal has been dropped.

Robert Graham

Cautious view in Italy

THE PRUDENTLY cautious outlook of the Italian heavy vehicles industry, in the forefront of the campaign to re-organise the sector on an international basis, is demonstrated as clearly as anywhere else by figures. This year, new investments by Iveco, the Fiat-dominated concern which is the second largest in Europe after Mercedes-Benz, is planning a drop in investment spending to $120m in 1979 from $203m last year.

After the massive $800m capital spending programme activated since the group's creation four years ago, the decline is, at the very least, comprehensible. But it testifies clearly to the generally sluggish state of national and international demand (with a few exceptions, such as West Germany) and the uncertainties thrown up by the energy crisis, as well as to the liklihood of an economic slowdown (if not outright recession) in many of the major Western markets later this year and in 1980.

The litany of complaint is familiar, with a few local grievances in Italy thrown in for good measure. The relative boom experienced in the country from late 1978 until this summer has hardly spilled over into the motor sector. The increased cost of oil, and the problems widely forecast over the supply of diesel fuel especially this winter in Italy are weighing heavily on future calculations.

In addition, the public sector investment programme, and, in particular, the housing and construction industry, which have a major impact on demand for heavy vehicles, are in the doldrums. It remains to be seen whether the new Government of Sig. Francesco Cossiga is strong enough, or long-lived enough to take action to change this state of affairs.

In any case, a strong argument against reflation is the risk of further stimulating inflation, which is now running at almost 15 per cent a year, and which well may grow further in the months ahead. The main policy priorities of the Government, as expressed so far, are to gain a better grip on prices and curb demand for energy, for which Italy is heavily dependent on imported oil.

In the meantime, every economic forecast is for a slowdown in the rate of growth from this autumn onwards. Expansion may be 2 per cent only in 1980 compared with 4.5 per cent or more in 1979.

These considerations lend added logic to the achievements of Fiat in creating, with Iveco, what is probably Italy's most imposing example of trans-European industrial integration.

The Turin-based group, far and away the country's largest private industrial concern, has long argued that rationalisation among the myriad European heavy vehicle producers is a must if it is to compete effectively with American rivals. In the U.S. half a dozen manufacturers cover a market with an annual demand of 1.4m vehicles. In Europe, more than 20 have to share a total domestic market of only 500,000.

Significant

In recent years the overdue concentration has started to take place. Berliet and Saviem in France, and (almost) Volvo and Saab-Scandia in Sweden. But the most significant development has been Iveco. The group, in which Fiat has a stake of 80 per cent and incorporated in Holland, embraces as well the heavy vehicle activities of its subsidiary Lancia, Unic in France and Magirus Denz in West Germany. The remaining 20 per cent of Iveco is owned by Kloeckner-Humboldt-Deutz.

Since 1975, Iveco has been busy establishing an integrated range of vehicles, and a unified system of parts buying and making components as far as possible internally. The concern now has 15 production and assembly plants in Europe (eight of which are in Italy) and employs in all 52,000 people. If the other Fiat heavy vehicle production units (outside Europe) are included, total output by the group last year topped 115,000 units. Sales by Iveco reached 108,897 units for a value of L3,013bn ($3.67bn) in 1978. Alfa Romeo, the only other Italian truck manufacturer, produced just 841 units.

However, the signs are that the slack demand which marked 1978 has carried over into this year. New registrations in Italy fell 13 per cent in the first six months to 18,350 units, with the only sign of buoyancy in the lighter vehicle sector, more closely aligned with the general pattern of consumer spending in the country.

Luckily for Iveco, however, this decline has been to a large extent offset by the surge in sales in West Germany, among its "domestic market." While registrations in France were virtually unchanged in the first half of 1979, those in Germany leapt over 40 per cent to 7,760 units, while the group's share of the market there increased to 14.2 per cent from 13.8 per ... in the same period ... year.

The progress was particularly rapid in the lighter vehicle category, for those under 3.5 tons weight. Thanks to varying improvements in the rest of Western Europe, the Eastern bloc and Third World countries, Iveco's total sales actually managed a tiny increase to 50,100 from exactly 50,000.

Prospects within Western Europe, which suffers in the view of most industry experts here of a structural productive over-capacity, are unexciting over th emedium term. This consideration only underlines the importance for Iveco and other producers of stepping up their activities in the Third World—above all, of course, in OPEC and those nations which have embarked upon ambitious industrialisation and development programmes. But the main problem there, as Fiat's president Sig. Giovanni Agnelli spelt out to his shareholders in July, is the constant threat posed by Japanese manufacturers, who now hold 50 per cent of the extra-European market.

To a certain extent, Fiat, and Iveco, have been able to build upon the Italian group's traditional strength in the Eastern bloc. Trading links with Bulgaria and Hungary have been stepped up, while the significant June deal with Poland provides for the production at Poznan of a new multi-version light vehicle. This will be jointly developed by Fiat and Poland, and incorporate in some variants a diesel engine produced by Sofim of Italy.

In the developing world, the group's task has been made somewhat easier by the belated improvements introduced over the last 12 months by the Rome authorities in export financing and guarantee facilities, bringing them more into line with those offered by competitor industrialised countries.

The conclusion of a number of major international contracts helped to lift Iveco exports four per cent in the first half to 18,190 units, while the group is negotiating assembly or manufacturing agreements with several North African nations, including Algeria and Morocco, as well as India and Iraq.

At home, however, the main efforts will be directed at the further refinement of what is already one of the most complete model ranges on the market, coupled with plant modernisation, and aerodynamic and other research into ways of meeting the most pressing problem of the hour, reducing fuel consumption by heavy vehicles. Quality, as much as quantity, is the main concern now.

Rupert Cornwell

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UK demand surprisingly buoyant

BRITAIN HAS provided importers with fertile ground for the second successive year. Demand this year has been much more buoyant than literally anyone forecast at the beginning of the year, catching some of the UK groups on the hop. They simply have not been able to make enough vehicles.

On the other hand, most other European markets have been depressed and so manufacturers there have not been short of products. Those with well-established UK networks have benefited tremendously.

In January, the UK market was confidently predicted on all sides to reach around 68,000 units over 3.5 tonnes gross weight, a little down on the 70,445 units for 1978. But demand has continued at such a high level even conservative pundits expect registrations to reach 74,000 and some say that they will make 78,000.

There seems to be no satisfactory answer to the question: "Why has this happened?" But corporate liquidity has been relatively high and inflation has been growing again to encourage companies not to delay too long in replacing their vehicles.

So, although commercial vehicle production in Britain has been higher this year so far—apart from the period in January when the hauliers' dispute interrupted the normal flow—the importers have continued to increase market penetration. After seven months of 1979 the importers' share of the total market for commercials had grown from 21.2 per cent at the end of July, 1978, to 22 per cent. The market itself had improved by 19 per cent.

However, British producers are much more happy about 1979 so far than 1978 as a whole. Last year followed a depressingly familiar pattern. UK output of commercials fell by 3.5 per cent from the 1977 level to 384,500. Industrial disputes at Leyland Vehicles' plant at Bathgate, Scotland, early in the year were followed in the autumn by the nine-week shutdown at the Ford plants to provide 1978's major trouble spots.

Yet registrations jumped 13.8 per cent to 256,285. And imported vehicles took 21.7 per cent of the market compared with only 16.5 per cent the previous year.

At the heavier end of the business (over 3.5 tonnes) the importers' gains have been almost all at the expense of Leyland—or rather by Leyland's default. The group's home market share dropped from 30.1 per cent in 1973 to 19.3 per cent in 1978—the group's worst-ever year. And although more Leyland trucks have been registered in the first seven months of 1979 than in the same period last year (8,127 against 7,965) the much greater growth of the total market has left Leyland's market share down again.

Plans

The company now has a new management team, which started work in January, and well-developed spending plans. A new £33m technical centre is going up at Moss Side, near Leyands, Lancs. The test track should be ready next spring and the laboratory later in the year.

A £17m modernisation scheme has started at the parts division at Chorley, Lancs., phased over some time like the Bathgate plant improvements. And £31m is being spent on a new assembly hall at Leyland, Lancs., which should come on stream in the first part of 1980. Although these projects have been in the pipeline for some time, it will be next year before we see the important new trucks from Leyland.

The group's new range of trucks from 16 tonnes to 44 tonnes—called the T45 range—will then be progressively introduced. If Leyland is successfully to penetrate EEC markets the T45 range has to be absolutely right.

While waiting for the T45 vehicles, in Europe Leyland has been concentrating on those countries where it already had some representation—Belgium, Holland and France.

Another truck range, code named T43, for other overseas markets and providing a bonetted truck, will also be launched later this year or early in 1980.

This truck range should make worthwhile the major expansion projects by Leyland in Nigeria, where it opened a new plant in the spring this year, and India, where a big investment programme has just begun.

Meanwhile, Leyland's UK-based rivals are not standing still. Ford, for one, has made it quite clear that it believes trucks are as important as cars. It will be spending £400m on its commercial vehicle business in Europe over the next four to five years, and half of this will be spent in Britain.

Almost certainly there will be a large-scale expansion of Ford's plant near Slough to cope with increased production of the middle-weight "D" series trucks, along with a complete revamp of the successful Transit van.

Ford's bigger brother in the U.S., General Motors, owns Bedford in the UK and is using the company to develop and produce commercial vehicles for its European markets.

Changes in the ordering of component and raw material supplies for the Bedford plant at Luton have enabled production to be given a major boost and a new truck line will be introduced shortly.

The future of Dodge should be more secure since Chrysler Europe was acquired by the PSA Peugeot-Citroen group of France. In June, Dodge lived up to its promise to the UK Government and launched a new range of light trucks — 3.5-7.5 tonnes—called the 50 series. The promise was made in 1975 at the time the Government began to pump £162m into Chrysler UK over four years to prevent its total financial collapse.

Although one U.S. group, in the shape of Chrysler, has quit the UK, another is building up rapidly. International Harvester acquired Seddon Atkinson in a £10m deal in 1974, put in new management in the shape of a managing director and marketing director from America, and IH research and development was made available to Seddon.

Success

A year ago Sedden plugged a gap in its range with the introduction of the 300 series trucks in the six-wheel, 24-tonne market. The cab and chassis were developed with help of IH's North American engineering centre and the range is powered by a well-tried IH diesel engine.

The 300 range has been highly successful from the start and Seddon expects to sell 500 to 600 of this made-for-the-UK truck this year.

As a result the company should be on target for total production in the region 5,300 trucks this year compared with 3,000 in 1976 and to move up to 6,000 in 1980.

To cope with the expected increase in market penetration, Seddon is spending £2.5m on a new parts distribution centre and office-warehouse complex for its service business. The centre should be ready in the early summer of 1980 and the office block at the end of next year. The new facility is at Walton Summit, not far from the existing parts centre at Preston.

Ambitious expansion plans are also under way at ERF which is spending a total of £10m for a new engineering and developments centre, due to be opened later this year, and a new production plant to come on stream early in 1981.

The new facility, at Wrexham, will supplement ERF's existing plant at Sandbach, Cheshire, which is now reaching its maximum capacity. Last year ERF turned out 3,000 trucks.

ERF is confident that it is not making the same mistake as its neighbour in Sandbach, Foden, which overreached itself financially with an expansion project some years ago and is still suffering the consequences.

ERF chairman Mr. Peter Foden says the group's policy is to concentrate on building up a larger share of the "lucrative" UK market—"Hopefully at the expense of our overseas competitors."

However, once imported products gain a foothold in a market they are extremely difficult to dislodge. And some of the Scandinavian and Continental companies now have more than just a foothold in the British market.

Volvo, for example, sold more trucks in the UK last year—3,725 — than in its native Sweden, an indication of the importance of the UK in Volvo's overall truck operations. Volvo and Scania paved the way in Britain for imported heavy trucks with high specifications.

Among the newcomers to the market, Daimler-Benz (Mercedes) of West Germany is making rapid progress. It expects to sell 6,000 commercial vehicles in the UK in 1979—twice the 1977 volume. The company is now half-way to its target of capturing 9-10 per cent of the UK market for commercials over 3.5 tonnes.

Daimler-Benz is Europe's biggest truck maker, and the second largest, IVECO, is also showing signs of wanting to increase its UK market penetration to significant percentages. IVECO is a pan-European organisation in which Fiat of Italy and Magirus Deutz of West Germany are included. So far, their British businesses have run along separate paths and probably will continue to do so at the retail and marketing end.

Fiat Trucks, with responsibility for vehicles of over 5.5 tonnes, has made impressive progress since the mid-1970s with unit sales in the UK rising from 229 in 1975 to 259 in 1976, to 601 in 1977, to 754 in 1978 and is on target for 1,410 this year. Magirus, at the heavy end of the truck business, has been having similar success recently—in the first seven months of 1979 its sales totalled 672 compared with 422 in the same period last year.

However, IVECO is to build a parts and service centre at Warrington (no price yet announced) and so Fiat and Magirus operations might be combined at that important level.

Unlike the passenger car business, it seems certain that Britain will remain a major commercial vehicle producer. The questions surrounding Leyland Vehicles are not so much about whether it can survive but about when it is going to show its full potential again. And the North American manufacturers continue to favour Britain as a manufacturing base.

In the short term, however, the main interest will centre on registrations in 1980 when the UK market is expected to "normalise." With demand less buoyant and competition even fiercer, we should have a much clearer picture of the strengths and weaknesses of both British and foreign manufacturers.

K.G.

Bedford's commercial vehicle sales last year reached 115,537 units, including 58,700 exported from the UK —of which 54 per cent went to Continental Europe. Above: Bedford's TM long-haul "concept" vehicle combines dramatically sleek looks with features designed to improve aerodynamics—including an adjustable air deflector on the roof

COMMERCIAL VEHICLE REGISTRATIONS

Country	1977	1978
Belgium	26,136	32,864
France	298,393	298,720
West Germany	137,959	156,202
Italy	111,861	98,248
Netherlands	43,334	46,920
Spain	101,342	98,758
Sweden	19,859	16,783
UK	225,222	262,002
U.S.	3,465,193	3,963,340
Japan	1,694,154	1,825,154

Source: SMMT.

Foreign manufacturers' success in U.S. market

THE RENEWED surge in foreign car sales in the U.S. this year is a development which has caught the public eye—as well it might with imports catching a record 23 per cent market share in August. But there has been less attention paid to the growing success that foreign truck manufacturers are seeing in marketing their vehicles in America.

According to Ward's *Automotive*, the authoritative Detroit-based newsletter, sales of imported trucks through the first eight months of the year to August have also been hitting new records and are over 50 per cent higher than in the same period of 1978.

The strongest gains have been made at the light end of the market and in pick-up trucks—in some cases with vehicles that are marketed under the brand names of a big U.S. car manufacturer. Thus, the Chevy Luv (imported from General Motors' Japanese partner, Isuzu) saw a sales increase of 71 per cent over this period. The industry leader amongst importers, Toyota, also secured a big gain with its sales rising 46 per cent to 86,337 units.

Although the light end of the market has been the segment which has seen the greatest growth, there seems to be little doubt that by the end of the year these big gains will have been whittled away.

In the wake of the sharp rise in petrol prices through the middle of the year, and consumers' growing concern about fuel economy of their vehicles, the boom which the light truck market has been enjoying has faded.

Between March and July sales of pick-up trucks and vans, both domestic and foreign, showed declines of up to one third, reflecting the fact that, in part, the earlier growth this year, was fuelled by leisure market demand which proved vulnerable to the petrol crisis.

Most industry executives are convinced that the market will not recover its earlier buoyancy with the economy facing recession. But this may not be of too much concern to those foreign companies which have been aggressively pushing ahead with U.S. expansion plans in order to build up their sales of medium duty (mainly class 6) trucks in the 19,500 to 26,000 pounds weight range.

Strategy

The prospect of a slowing of the economy and perhaps an easing back of capital spending plans by industry will not, of course, be welcome. But the latest fuel crisis, and the performance of these (mainly) European-based invaders of the U.S. market so far this year, must encourage them to believe that the bolder strategies they have developed for penetrating the U.S. market are both well-founded and well-timed.

One of the basic assumptions of this strategy has been the probability that the class 6 segment of the market ranging from such things as school buses to medium- and long-distance trucks, would increasingly be converting to diesel engines in pursuit of fuel economy. Since the U.S. manufacturers had gaps in their fleets for diesel-engined equipment, the foreign manufacturers have perceived a hole in the market which they can expect to help fill as the U.S. builders themselves move to meet their challenge by building up their own diesel-engined output.

The scale of the opportunity has been illustrated by predictions from International Harvester, one of the U.S. industry leaders, which has predicted that the diesel-engined truck will increase its share of the class six truck market to 15 per cent by 1980, 23 per cent by 1983 and 35 per cent by 1985, or a share of approximately 70,000 units out of a total market which by then could be 200,000 units.

The latest round of fuel price increases could mean that the spread of the diesel engine in trucks from the heavy duty, class seven and eight market (where it is dominant) to the medium duty market will be accelerated.

Currently, diesel has a market share of about 8 per cent (11,000 units) out of the medium duty market.

One of the more adventurous strategies being pursued is the proposal by Mercedes Benz, a subsidiary of the West German Daimler-Benz AG, which is in the process of building an assembly plant at Hampton, Virginia.

Mercedes' move is generally seen as partly defensive, aimed at protecting the market share it has built up since 1969 when it started importing a range of eight models into the U.S. from Germany. Subsequently it switched the supply source to Brazil, the company's largest foreign-based manufacturing subsidiary.

Mercedes Benz was already the largest seller of foreign-made diesel-powered trucks in the U.S. market and there had long been speculation that the parent company would eventually establish a plant on the U.S. mainland, in part because the absence of such a facility seemed increasingly to be a missing link in its web of nine production plants and 28 assembly facilities around the world.

Strength

The company's position in the U.S. has been strengthening this year. According to Wards' *Automotive*, through the first eight months it sold 2,280 trucks in America, compared with 1,386 last year.

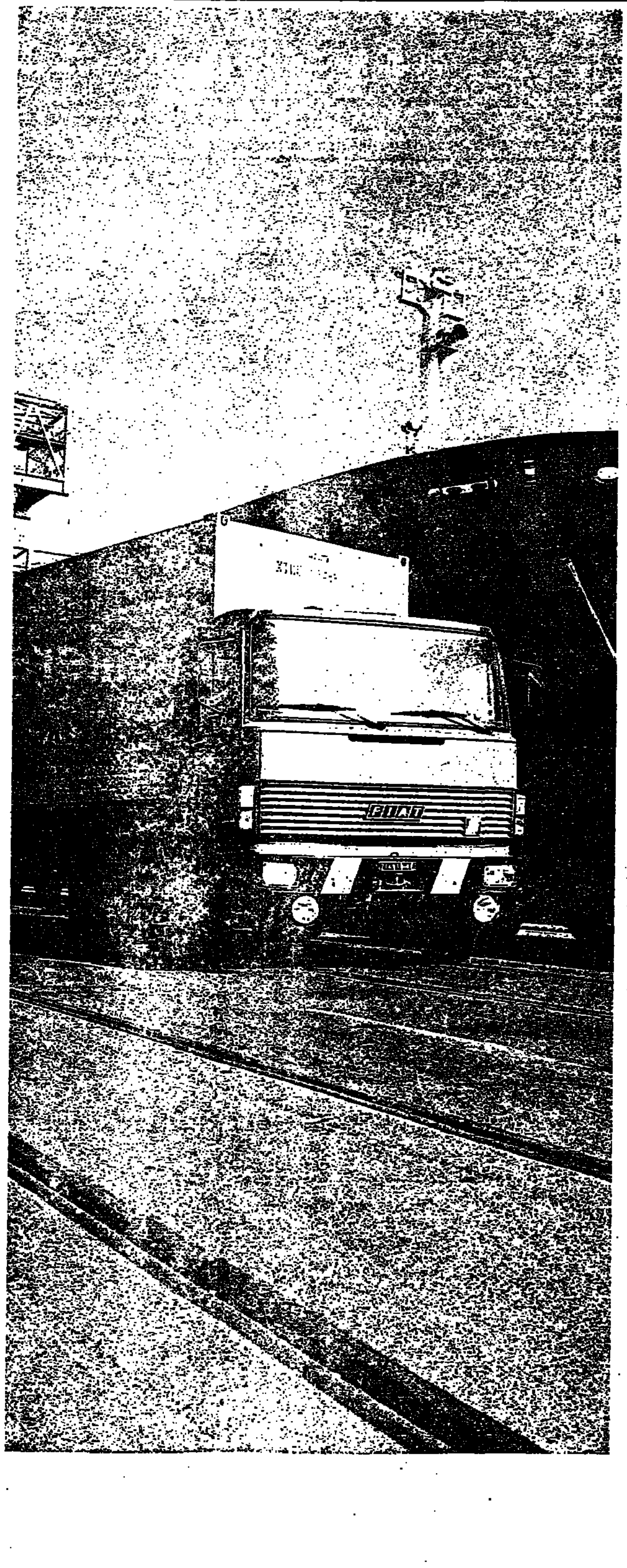
Mercedes Benz is not alone in its efforts in the U.S., however. Renault, the French state-owned automobile manufacturer in May announced that it had struck a deal with one of the leading U.S. truck builders, Mack Truck, a subsidiary of Signal Companies under which Mack will import Renault vehicles in the diesel-engined class six and seven range. Renault is taking a 20 per cent stake in Mach for $115m to cement the partnership.

Only last month Iveco, the Italian-West German truck manufacturer (which is 80 per cent owned by Fiat and 20 per cent by Klockner-Humboldt-Deutz) announced that it is examining the possibility of assembling trucks in the class six and seven range in the U.S.

Volvo, which has been selling trucks in America for three years, is also tackling the market more aggressively, but aiming at the heavy duty segment. It has completed an arrangement with Freightliner Corporation, a subsidiary of Consolidated Freightways, to cover marketing in the U.S.

Another company whose moves are being closely followed is Maschinenfabrik - Augsburg - Nurnburg (MAN). Earlier this year, plans were called off to link with White Motors and inject $76m into the U.S. company, in search of a wider U.S. market. But it is widely believed that MAN's interest in the U.S. market has not disappeared.

Stewart Fleming



An increase in joint ventures

THE POTENTIAL co-operative arrangement between Dodge Trucks, PSA Peugeot-Citroen's commercial vehicle subsidiary, and DAF of Holland focused attention once again on the growing number of joint ventures in the industry.

And the first fruits of a West German co-operation project presented to the public in time for the Frankfurt Motor Show, earlier this month. Some of the trucks jointly developed by Volkswagen and MAN (Maschinenfabrik Augsburg-Nuernberg) were put on display.

Dodge and DAF are investigating the possibility of technical and manufacturing co-operation. The main objective of the study is to examine the possibility of various forms of co-operation ranging from exchange of certain components to the future development of common components using the existing resources of both groups.

Initial evaluation of the existing facilities and products suggests that co-operation in some form could improve the scale of operations of component manufacturing for both companies.

We must wait until the end of the year to see what arises from the study and meanwhile the implications of the deal are discussed elsewhere in this survey.

What of the VW-MAN project?

VW is the only major car manufacturer in the world which does not have a truck business. Its vehicle range peters out at around the six tonnes level. MAN, on the other hand, makes only heavy trucks.

So they have worked together to produce a range of six to nine-tonne trucks to fill the gap. The arrangement between the two groups is that VW makes the cabs, rear axles and gearboxes for the new range while MAN produces engines, frames, front axles and special bodies.

Co-operation

And, taking the co-operation even further, VW and MAN have been reviewing their European sales and marketing organisations to see how they could be combined so that a complete range of commercials, from the lightest to the heaviest, could be offered by one VW-MAN franchise.

So far, this has been achieved in Britain and Holland. The arrangement between the two groups is entirely informal. There is just a supervising committee, made up of three people from each company.

Not that VW would not like to welcome MAN to the fold. It is just that MAN's parent group, Gutehoffnungshuette, does not want to sell and, in any case, the deal might well attract unfavourable responses from the West German Cartel Office.

But collaborative deals make a sound alternative to straightforward mergers for companies in an industry, like truck making, where the economies of scale are not easy for an individual group to achieve.

However, the pressure being placed on commercial vehicle makers by legislation, both national and international, grows stronger every year. Inflation is putting up the cost of new development, and the industry is short of design engineers. There is, after all, a limit to the industry's resources of cash and talent.

It would probably cost around £50m to design and bring a new truck to the market place today. And that would incorporate an existing drive-train. Developing an entirely new engine would probably cost £200m (which explains why you don't see many of them) and about half that sum would be needed for a new gearbox.

A truck is only a number of components and if those components are costly, so is the truck. But if the components can be made in quantity the fixed costs are spread further and the truck maker need not charge so much.

These pressures have always been present for the commercial vehicle makers of course and collaborative ventures are not a new phenomenon.

For example, at the end of the 1960s the so-called "Club of Four" was formed by Volvo of Sweden, Daf of Holland, Magirus-Deutz of West Germany and Saviem of France (at the time a Citroen subsidiary).

All the companies then were small-to-medium-sized truck makers which needed to spend more on research and development and design but could not afford to.

In 1971 they formally agreed to develop a new concept in cab and chassis designs. They funded the introduction of a cab for a new generation of lightweight trucks. Each of the partners took the cab and individualised its basic structure and added their own engines, gearboxes, axles and so on.

Saviem had room at its production facilities to make the cab parts and still does.

Today the jointly developed cab is used on Volvo's light F truck and even the new F7 cab contains many of the Club cab components. Daf used the cab on its light trucks in Holland while Saviem employs it on the J-range.

The project was ambitious and not entirely successful. The cab is not as cheap to produce as was hoped. When the development process was over the Club disbanded because in the meantime the four partners had changed considerably—mirroring structural changes in the European commercial vehicle industry.

Saviem became linked with Berliet under the Renault umbrella after Citroen ran into temporary financial troubles. Its car business went to Peugeot and the commercials to Renault under the terms of the French Government's rescue plan.

International Harvester of the U.S., one of the world's major truck makers, made overtures to Daf and bought some shares. For a while a full merger seemed on the cards but the two potential partners fell out and are still at loggerheads.

Magirus, formerly owned by Kleckner - Humbolt - Deutz (KHD) of West Germany, became part of the IVECO business, the commercial vehicle group inspired by Fiat of Italy and now Europe's second-largest.

And Volvo, thanks to the success of its products and marketing, is no longer a small concern. Its output has doubled from about 15,000 to 30,000 units a year.

Fiat, which dominates its home automotive market, has had to look outside Italy for growth—either by merger (the IVECO route) or by joint venture.

At the lighter end of the commercial vehicle business, Fiat has a co-operative deal with Citroen and between them they make a van which fits into both their ranges—as the Fiat 242 and as the Citroen C35.

Fiat makes the bodies for these vans in Turin and each of the partners incorporates its own petrol engine when required but the diesel engines are provided by Citroen.

Solution

Fiat aims to cope with its shortage of diesel engine capacity via a joint venture, too. Together with its neighbour in Italy, Alfa Romeo, and Saviem, it has set up Sofim (Societa Franco Italiana di Motori), a company which makes diesels at a new plant at Foggia in Southern Italy.

The 2.4 litre Sofim engine is being used to power the new IVECO range of vans and light trucks. And Fiat is using them in diesel versions of its 131 and 132 cars. The Sofim plant will also make three-cylinder 1.8 litre and six-cylinder 3.6 litre diesel engines.

Fiat's newly-formed light commercial vehicle division has an important joint venture with PSA Peugeot-Citroen to manufacture new vehicles in a £153m production facility to be built in Val di Sangro, in the Abruzzi region of southern Italy.

The vehicle to be produced will compete with Ford's Transit and BL's Sherpa, filling the gap below the 1978-launched Fiat Daily (also known as the OM Grinta) which covers the 3-4 tonnes range.

The new Fiat/Peugeot vehicle will arrive some time in the future. But earlier this year a cross-country vehicle was launched, the product of a joint venture between Daimler-Benz of West Germany and Steyr-Daimler-Puch of Austria. Between them they have spent the equivalent of £27m to develop what some people maintain is the Range Rover's main rival and build a plant at Graz in Austria.

Production started in February and output in the first full year should be around 9,000 rising to perhaps 15,000 to 20,000 depending on demand. Called the "G" (for Gelaendewagen) range, most of the vehicles will be sold with a Mercedes badge but in Austria, Switzerland, Yugoslavia and the

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Slow progress in EEC harmonisation

TACHOGRAPHS, lorry weights and regulations on drivers' hours dominate the debate on ways of harmonising British transport practices with European Community legal requirements.

In Britain, the tachograph has been at the centre of the longest-running debate on harmonisation.

There has been vehement opposition by road hauliers, coach operators and trades unions, which succeeded in persuading the last Labour Government not to take action leading to the introduction of domestic tachograph regulations.

Mr. William Rodgers, transport secretary under the Labour Government, stalled for time and refused to bring Britain into line with other EEC nations.

His inaction led inevitably to the Commission taking Britain to the European Court of Justice, which had no difficulty in agreeing that Britain had broken the EEC tachograph regulations. The UK was found guilty in February and Mr. Rodgers was given only a matter of weeks to say that he intended to accept the court ruling.

There were no previous cases of members of the EEC failing to abide by a court ruling and within a month the Government said it would go ahead with consultations leading to regulations for the compulsory introduction of tachographs into certain categories of goods vehicle.

Criticism

Mr. Rodgers' statement was seen as a climbdown by members of his own party. Miss Joan Maynard, the MP for Sheffield Brightside talked of a "miserable capitulation by the Government." Mrs. Renee Short, MP for Wolverhampton North-East, forecast "terrible trouble as drivers regard the tachograph with absolute abhorrance."

Further opposition to the move followed the Government's statement and transport department officials continued to insist that Britain's own sysem of enforcing driver regulations—using logbooks and spot checks by police—was perfectly effective.

Opposition to the tachograph from trades unions was vocal and threatening immediately after the ruling from the court of justice. But by the time Mr. Norman Fowler, the new transport minister had announced in May that consultations leading to the introduction of the tachograph were to start, union opposition was much less in evidence.

However, the road hauliers, led by the Road Haulage Association, which had earlier totally opposed the compulsory tachograph, softened its approach, but still called for certain vehicles to be exempt.

The Freight Transport Association, representing transport users, also opposed the compulsory use of tachographs, also called for exemptions and wanted a five year phasing-in period.

There is no information at present on possible exemptions, but the broad timetable for the introduction of the tachograph is now clear.

The Government intends to achieve full implementation of regulations to bring Britain into line with Europe by the end of 1981. The object is to gain Parliamentary approval for the regulations by December 31 this year. This would give the Government a full two years to enforce the introduction of the tachograph, slightly longer than the 18 months which was demanded initially by Brussels.

Draft regulations will be published this autumn, but they are expected to be sufficiently flexible to permit changes which may be demanded by unions and operators. There may even be some flexibility over the phasing-in of the measures.

This flexibility may have to be invoked if the expected opposition to the timing from the unions and the users becomes too hot for the Government, at a time when it is embarking on other, equally controversial transport measures in a new transport bill, including plans for more competition in the express coach business.

However, a longer phasing-in period of up to five years is favoured by many of the strongest opponents of the tachograph, including the road hauliers.

The two-year period now proposed has been agreed with officials at the European Commission in Brussels. Any change which may arise after the draft regulations are published would, however, have to be approved again by the Commission.

However, there is likely to be a limit to the willingness of the Commission to approve any further delays by Britain in bringing herself into line with Europe.

The original tachograph regulations, 1463/70, were adopted by the Council of Ministers of the original six member states in July 1970. The broad object was to improve the safe operation of goods vehicles and passenger coaches, by recording the hours a driver is behind the wheel.

The EEC regulations call for the tachograph to record the distance travelled by a vehicle, the speed of the vehicle, the driving time, other periods of work or attendance at work by crews, breaks from work and daily rest periods and every instance the case containing the record sheet is opened.

When Britain joined the Community in January, 1973, the Act of Accession allowed Britain to introduce the tachograph in newly registered vehicles by January 1, 1976, a year later than in the original six members. By signing the Act of Accession, Britain was legally bound also to enforce EEC regulations calling for all vehicles to be fitted with the recorders by January 1, 1978.

However, British and Italian proposals for exempting passenger vehicles designed to carry up to 15 people, have been agreed by the Commission, provided that the vehicles are used only for domestic travel. Britain also succeeded last year in getting approval for its proposals to exempt these vehicles from the EEC drivers' hours regulations.

The Road Haulage Association wants three other categories of vehicle to be exempt from the regulations. The association wants to exempt all vehicles engaged in transport operations in a radius of 60 kilometres (37 miles), all vehicles which have a maximum authorised gross weight of 7.5 tonnes and all special-purpose vehicles such as multi-wheel transporters, which are licensed to operate over Britain's maximum of 32 tonnes gross weight.

There has been more progress, however, in bringing Britain into line with the European Commission's regulations on drivers' hours.

Implementation of Britain's regulations has been steadily taking place over a period. The last round of cuts in the maximum permissible hours which may be driven by drivers of goods vehicles over 3.5 tons gross and buses and coaches except on routes under 50 km, came in July.

The lorry drivers affected were then permitted to drive continuously for a maximum of 4.5 hours, with five hours being the maximum for coach drivers.

The maximum continuous lorry and coach driving period will be cut to 4 hours when the regulations are fully implemented by January 1, 1981.

In the meantime, coach drivers will have their maximum permitted continuous driving time cut to 4.5 hours on October 1, 1979.

The daily driving period for lorry drivers was cut to 9 hours in July, and the coach drivers will have the same maximum from October 1, 1979. Both groups will have their maximum daily driving period set at 8 hours when the regulations are fully implemented by January 1, 1981.

The lorry drivers' maximum weekly and fortnightly driving periods were cut to 54 hours and 106 hours on July 1, this year; the coach drivers' hours will be cut to the same level from October 1 this year and the final change, to a weekly maximum of 48 hours a week and 92 hours a fortnight for both groups will be implemented on January 1, 1981.

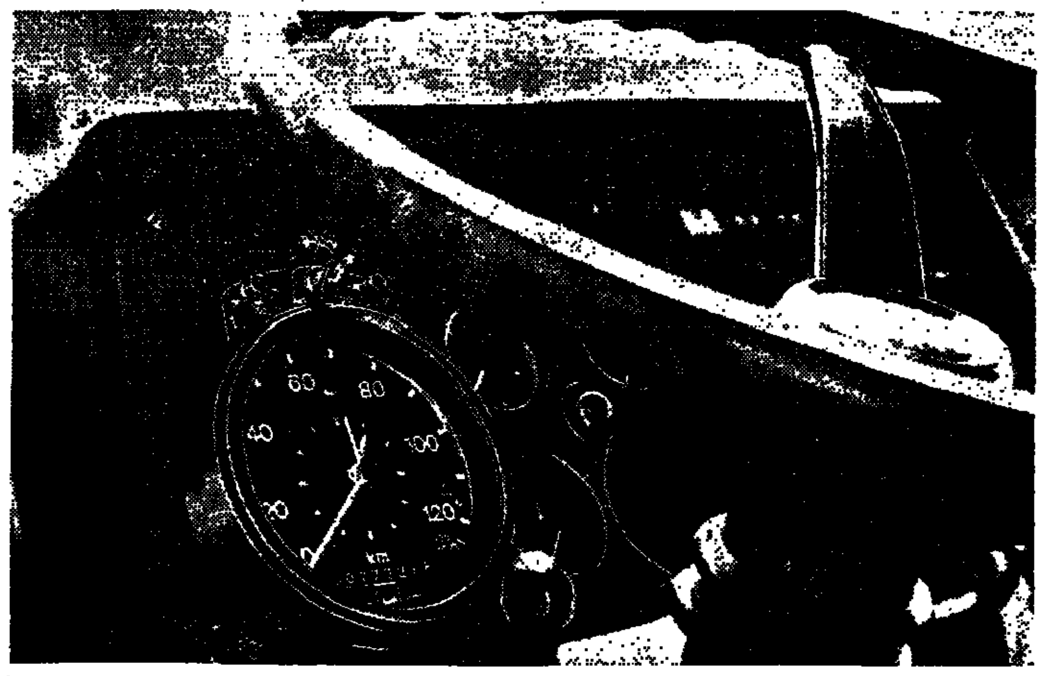
It has been estimated by hauliers that the change in the maximum permitted number of driving hours will have cost the industry between 10 per cent and 15 per cent in productivity by the time the regulations are fully implemented.

One of the other main effects is likely to be that long distance trunk haulage by lorries may become uneconomic as a result of the reduction in the maximum permitted in drivers' hours.

The lorry weights question is still unresolved and the Commission published a detailed paper suggesting a new maximum gross weight of 44 tonnes in December last year. The British maximum is now 32 tonnes although a Transport and Road Research Laboratory report, also out last December, said there may be an 18 per cent saving in energy if the maximum weight was raised to 38 tonnes.

Britain is taking further action to study the possible impact of a heavier maximum lorry. The independent inquiry—chaired by Sir Arthur Armitage—set up by the Transport Department to investigate the impact of the lorry or people and their environment, has been asked by the Government to look particularly at the heavy lorry.

Lynton McLain



Britain intends to achieve full implementation of the controversial tachograph regulations to bring the UK into line with Europe by the end of 1981. Above: A Kienzle EC 1311 tachograph fitted to a truck dashboard

EUROPEAN VAN AND TRUCK REGISTRATIONS*

Market sector†	1970 Number of units in 000s	1970 % share of market over 2 tonnes	1977 Number of units in 000s	1977 % share of market over 2 tonnes	1984‡ Number of units in 000s	1984‡ % share of market over 2 tonnes
Vans	334	55.0	372	61.7	469	65.7
Light trucks	198	32.6	418	24.5	142	19.9
Heavy trucks	75	12.4	83	13.8	103	14.4

* Countries included: Belgium, France, West Germany, Italy, Netherlands and the UK. † Sectoral definitions: Vans=2.01-3.50 tonnes GVW; light trucks=3.51-16.0; and heavy trucks=over 16 tonnes. ‡ Projected.

Source: Economic Models Corporation.

Ventures

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Comecon countries it will be sold as a Puch.

Some well-tried components are incorporated in the new range to keep the costs down. Daimler-Benz is supplying engines, transmissions, axles and steering assemblies. Steyr is providing frames and bodies.

Prudent

The link provides a useful automotive "diversification" for both companies. Even a financially-powerful organisation like Daimler-Benz believed it was prudent to share the cost of the venture.

Like Fiat, Daimler-Benz, having grown large by acquisition as well as organic growth, now has to look for joint projects when cost-spreading is essential.

It has, for example, a manufacturing agreement with MAN in which the two groups share the production of axles while Daimler-Benz provides the blocks for MAN engines.

Unfortunately for Daimler-Benz, however, the West German Cartel Office seems set on preventing further commercial links between its local truck makers—or at least in areas where they are supposed to compete.

The Cartel Office takes very seriously its job of preventing manufacturers uniting together in cosy clubs. It destroyed GKN's attempt to acquire the Sachs clutch manufacturing group by taking the whole project to court arguing that the tie-up of GKN's existing West German offshoot, Unicardan, and Sachs was undesirable.

And more recently it scuppered a plan for IVECO to set up a joint venture with Daimler-Benz to produce heavy-duty automatic transmissions.

Decision

As far as the Cartel Office was concerned, it did not like the idea of Magirus-Deutz, Germany's second-largest trucks business, chatting to Daimler-Benz, Germany's (and Europe's) biggest truck making group. It didn't like it, even though Magirus was apparently in the background behind the IVECO umbrella. There was no formal objection by the Cartel Office but, having been given a nod of disapproval, IVECO and Daimler-Benz dropped the project.

E.G.

Inquiry into impact on environment

Traffic jam near London's Elephant and Castle area

IT HAS been a momentous year for the lorry. Never before has the heavy truck—the "juggernaut" to those who oppose it—attracted so much attention or been exposed to such a range of probing examinations as those which started or finished this year.

Lorries carry two-thirds of domestic freight and January opened with a spectacular demonstration of the importance of the lorry to Britain's economy and of its environmental impact.

The strike by drivers employed by members of the Road Haulage Association showed the heavy lorries in enforced idleness are powerful weapons in the hands of militant trade unionists. For weeks, Britain was left in a trading vacuum. No cargoes entered or left Britain's ports.

Motorways and roads through towns and villages were quieter, but the stillness came at the expense of those industries and shops which almost ran out of raw materials and food.

There has also, however been a range of other developments, by the Government, by the European Commission, by vehicle designers, by oil sheikhs with higher oil prices and by environmentalists, all designed to change the relationship *between the lorry and the* environment.

The main developments have highlighted the polarised positions of the commercial vehicle operator—hoping to reap the benefits of economies of scale from heavier lorries—and the environmentalists. Those in favour of more control see the heavier lorry as likely to wreck attempts to bring lorries into a more harmonious relationship with people and their world.

The Government is already laying the groundwork for a policy for heavy lorries which may influence land transport in Britain throughout the next decade.

The first stages of the work are to be done through an independent committee of inquiry, announced by Mr. Norman Fowler, Transport Minister in May.

The study will follow the terms and references suggested by the previous Government.

The inquiry is to be conducted by Sir Arthur Armitage who is the vice-chancellor and professor of common law at Manchester University.

Task

His task, defined by the Government, is to "consider the causes and consequences of the growth in the movement of freight by road, and in particular, of the impact of the lorry on people and their environment."

However, despite the generalities of the brief, Mr. Fowler made it clear that he expects Sir Arthur "to face squarely whether there should be any change in the present limits on maximum lorry weights."

At the end of his inquiries, Sir Arthur has to decide "how future development of the lorry best serves the public interest."

This is at the very nub of the argument. Environmental improvements may be called for, but Sir Arthur can be expected to make it clear that greater controls, in weight or in freedom of movement, have to be paid for.

Sir Arthur is assisted by four assessors, including two leading academics concerned with the environment—much to the dismay of the Freight Transport Association, which represents the transport interests of 15,500 companies in industry.

Sir Henry Chilver, vice-chancellor of Cranfield Institute of Technology, and Professor P. J. Lawther, professor of environmental and preventive medicine at St. Bartholomew's Hospital, London.

The Association said this month that it regarded the group of assessors as "unbalanced." Sir Henry is a civil engineer concerned with environmental issues. He is also a current member of the Royal Commission on Environmental Pollution, a member of the Commission on Energy and the Environment and a former director of the Centre for Environmental Studies.

Professor Lawther is chairman of the Health Department's working party on lead pollution from factories and vehicle exhausts.

The other assessors are Miss Audrey Lees, county planning officer of Merseyside County Council, and Professor Ray Rees, professor of economics at University College, Cardiff. Professor Rees is a former consultant to the Treasury.

It is unlikely, however, that the results will have been assessed in time for inclusion in Mr. Fowler's planned Transport Bill, to be published this autumn.

One of the most recent and controversial measures already on the Statute Book, is the Heavy Commercial Vehicles (Control and Regulations) Act—the so-called Dykes Act, after Hugh Dykes, the MP who proposed the controls. These gave legal force to lorry bans on environmental grounds in 1973.

It has taken some years for the impact of this Act to be felt.

Interpretation of the Act by Berkshire County Council, however, caused a storm of protest from hauliers late last year. The Road Haulage Association, the Freight Transport Association and the National Farmers' Union took the council to the High Court after a local ban changed the pattern of lorry operations in Berkshire.

The Berkshire scheme banned most vehicles over 5 tons unladen weight from entering one 25-yard and 11 50-yard stretches of road around Windsor. These selective lorry bans—the so-called "Windsor Cordon"—have had the effect of banning much commercial traffic over a total area of 40 sq miles.

The ban has certainly been controversial. Hauliers affected by the ban said that by not specifying the total area to be affected, the council may have broken the law. But Mr. Justice Neill, who rejected the hauliers attempts to have the ban lifted, said the Act required only the specific roads affected by the ban to be named in the banning order.

However, the Government's Transport and Road Research Laboratory, in a report on the Windsor Cordon in November last year, said that the extra distances lorries had to travel and the extra time involved was equivalent to a total annual increase in lorry operating costs of £410,000 a year.

The estimate was based on the average of 3½ miles lorries had to travel on a single trip to avoid the restricted roads.

The council said in July (when it announced plans to make the experimental ban permanent) that local hauliers had benefited from lighter traffic. But it also said that the greater number of heavier lorries using other roads and making longer journeys, is a point which the council would examine carefully "in the light of the energy crisis."

The hauliers are to appeal against the High Court ruling of last December.

However, lorries do not only have an impact on the environment when they are on the move. The Foster Committee, in its report on road haulage operators' licensing in January, said that licensing authorities should not grant licences for road hauliers' operating centres unless satisfied that they are "*environmentally*" *suitable*.

The committee also wanted the authorities to have powers to impose conditions on operations at these centres—which could include garages, depots and back-street areas—where there could be on-street parking and noise.

The Foster report also called on the Government to "undertake a major programme of research into the environmental impact of heavy lorries and how far this would be alleviated by new roads, by-passes and control of noise and smoke."

Response

The Government has given no indications about its general response to the Foster Report and may even allow its recommendations to remain on the shelf without action. This is certainly likely to be the fate of the call for more research into the impact of the lorry, which has largely been overtaken by the Armitage inquiry.

However, the Government is determined to make changes in the taxes on different classes of goods vehicle, in a move which may have a direct, positive impact on the environment. But the Foster committee suggestion that an independent body should be set up, to review road damage costs attributable to lorries, annually has so far not formed the basis of any Government actions.

Instead, a consultation paper setting out the Government's proposals for restructuring vehicle excise duty on heavy goods vehicles was published by Mr. Fowler in August.

The changes will affect about a quarter of a million vehicles over 12 tonnes gross weight. In future, if the changes are passed by MPs, these vehicles will be taxed according to their gross weight and number of axles.

The weight and the number of axles of a vehicle are among the main factors contributing to road wear and damage.

The Government uses the concept of "road track costs" in attributing the cost of this road damage to vehicles.

The Government gets income from vehicle operators through fuel tax and vehicle excise duty. This financial year the total from all goods vehicles is expected to be £960m (£600m of which will come from vehicles over 12 tonnes gross weight).

State capital is spent on roads and through the "road track costs" the Government tries to relate road spending with the tax on vehicles which do the most damage. Total road costs for goods vehicles may be about £730m this financial year of which £590m is for goods vehicles over 12 tonnes gross weight.

The figures show that income from heavy lorry taxes almost matches the road costs attributed to these vehicles. The Government accepts, however, that noise and pollution costs, which cannot be measured objectively, are over and above the road costs. *These other costs are accounted for in the* Government's proposals for making lorries pay for road costs in a fairer way.

At present, some groups of vehicles pay taxes higher than their direct road costs and some of the heaviest lorries fail to cover their costs.

This latest move by the Government to make goods vehicles more directly accountable—in financial terms—for environmental damage, at least to roads, may bring Britain into line with proposed European Community changes.

A draft EEC directive, the "ANTS" directive, has been prepared calling for changes to make lorries pay for road damage through taxes.

There is provision for EEC members to introduce a supplement over and above a proposed minimum tax covering road wear, which would enable taxes to cover full road costs, including capital costs.

Such proposals may give operators an incentive to buy less damaging, and more environmentally acceptable vehicles, but they are certain to be hotly opposed by hauliers, who are already faced with steeply rising costs, up 17.5 per cent in the first six months of the year. A proposal for spreading these costs was made earlier this year by the Lorries and the Environment Committee, when it said that half the cost of distributing goods to High Streets could be saved if companies combined deliveries. Marks and Spencer had already cut the number of lorries making non-food deliveries each week to some stores from 60 to 12 after consolidation of loads.

Lynton McLain

Moves to improve fuel-efficiency

THREATS OF oil crises, rocketing cost of fuel and a growing concern about pollution from road vehicles is making commercial vehicle manufacturers think very carefully about making their products more efficient.

In general, there are three main ways in which fuel savings can be made:

- Increasing the efficiency of the engine and vehicle mechanics.
- Improving the aerodynamics and rolling resistance performance.
- Sensible vehicle use and maintenance.

But vehicle manufacturers only have effective control over the first two. In fact, manufacturers such as Bedford Commercial Vehicles and Leyland vehicles have embodied its thinking on future truck designs in a concept vehicle which will never reach production but shows what companies are working towards in producing better, more economic, vehicles.

In Britain, about 7.5m tonnes of petrol and diesel fuel are used by freight transport on road and rail each year. This accounts for around 12 per cent of petroleum products which are consumed.

But lorry traffic on the road has been growing at a much slower rate than the amount of goods which are carried on the road. The reason is that the capacity of lorries and trucks have been steadily increasing.

The highest capacity vehicles today account for about 14 per cent of the heavy goods fleet. This class of vehicle also accounts for nearly half the tonne-kilometres travelling in this country.

Some people in the transport industry are advocating that larger capacity vehicles be introduced, such as the 36-tonne trucks in the rest of Europe. They claim that fuel consumption and operating costs do not increase in proportion to carrying capacity. For example, a reduction in operating costs of 6 to 7 per cent can be gained if a vehicles capacity is increased from 32.5 to 38 tonnes.

But the introduction of heavier trucks on the road brings up the unpleasant subject of extra damage to road surfaces not to mention extra noise and vibration.

If fuel efficiency is the prime consideration there is even the case for lowering the power of vehicles so that they have a ratio nearer the regulation minimum.

Work carried out by the Transport and Road Research Laboratory shows that a reduction in engine power of around 5 per cent could result in a 1.4 saving in fuel consumption. However, regulations which affect fuel noise and emission can completely negate such savings.

Regulations

But if Europe and Britain, in particular, is to follow the U.S. and Japan's lead and introduce quite stringent regulations on noise and pollution manufacturers will have to pay close detail to this aspect of design since vehicles would have to perform to the regulations over 50,000 miles.

For example, it has been estimated that 16 per cent of vehicles are emitting excessive smoke. This indicates that some of the fuel is appearing unburnt in the exhaust, which is wasteful. The adidtion of sephisticated electronic detectors could ensure that more of the hydrocarbons are burnt and that the engine is running more efficiently. Here anti-pollution measures actually save fuel.

But measures to reduce some of the more unsavoury emission in the exhaust, such as oxides of nitrogen using catalytic converters actually increases fuel consumption up to 20 per cent.

On a conventional petrol driven engine for smaller trucks and vans i is possible to increase the compression ratios since this improves the thermal efficiency of the engine. According to tests, over the ratio range 7.9 to 9.5 to a this improvement averages 4 per cent per unit increase in compression ratio. Also a petrol engine with its spark ignition can make use of electronics of engine monitoring and control which improves fuel consumption.

On diesel engines there is the increasing use of turbochargers since this improves combustion. Savings are dependent on the operating conditions such as whether or not it is operating a full load and whether or not the vehicles use motorways extensively.

However, if progressively stringent regulations are introduced in Europe, as they already are in the U.S. and Japan, it may well hasten the introduction of more models with turbochargers since they can increase overall performance while maintaining low emissions and acceptable fuel economy. From research, indication are that turbocharging correctly matched to a smaller engine could improve fuel consumption by around 10 per cent.

There is the temptation that with the continual improvement in engine performance that drivers will tend to use the extra power to increase their speed. But it is well-known that easing off the accelerator a little can result in significant fuel savings—so, manufacturers are contemplating the introduction of speed limiters on vehicles which will prevent exceed the economical limit of that paricular model.

Another fuel saving measure is the introduction of thermostatically-controlled fans and shutters for the engine but these are usually fitted as an option but are claimed to proffer economies.

The aerodynamics of the commercial vehicles is also a crucial part of the design from the fuel consumption considera*tions. This is highlighted by* the fact that the relationship between aerodynamic drag and road speed is based on a square law. So, the doubling of speed results in a fourfold rise in drag.

The shape of the body and cab of a vehicle is therefore important. But the type of load which is carried also affects the aerodynamics. The drag of a vehicle is taken into account at the design stage but since a model may be used for widely varying applications it is becoming practice to design add-on air deflectors so that operators can streamline their trucks according to the shape of the load.

Both Leyland Vehicles and General Motors have concept vehicles which take into account possibilities of streamlining. For example, Bedford's concept vehicle has a hydraulically *operated air deflector on the* roof of the cab, vertical spring loaded deflectors that fill the gap between the space between the cab and the trailer, chassis sides which are faired-in with detachable covers for the rear wheels, and a deep air dam built in below the front bumper.

It has been shown that streamlining devices can improve fuel consumption by up to 14 per cent when the vehicle is unladen to over 10 per cent when fully loaded.

These are just a sample of the work which is being carried out by companies like Leyland Vehicles, Dodge Trucks, Bedford and Ford to make vehicles more efficient.

Some others include, research on transmission, reduction of friction by improved tyre design, vehicle weight reduction and gearing optimisation.

But equally important is driver education so that the vehicle, once in operation can perform to its specification. Good maintenance is also the only way of ensuring that such performance is sustained over the vehicle's lifetime.

Elaine Williams

Daimler-Benz, of West Germany, is the world's biggest heavy truck producer. Next year the company will also begin assembling commercial vehicles in the U.S. Above: A truck cab being fitted on to a chassis at the Company's Woerth plant on the Rhine

Changes in engine design

IN A WORLD where fuel economy is becoming a priority, manufacturers of diesel engines are clearly in a strong position, but at the same time development costs have risen sharply and companies cannot allow themselves to fall behind new engine design.

An example of this is the decision of the giant American diesel engine company, Cummins, to boost existing production in the UK and introduce a new 10-litre commercial vehicle engine.

The new engine programme, which will cost around £100m, will involve manufacture in the U.S. and in Britain, at a site as yet undecided, with production due to start in the early 1980s.

The company can see a rapidly increasing market on both sides of the Atlantic for a fuel-efficient diesel truck engine which, if produced in volume, will provide tough competition for the traditional suppliers of these engines, Massey-Fergusson owned Perkins of Peterborough, L. Gardner (owned by Hawker-Siddeley) and Rolls-Royce.

Production of the new engines, starting in early 1982, will be split between the company's plants in the U.S. and the UK. Initial output should total 150 engines a day, which will be increased to 300 a day by the mid 1980s.

Initially, it was envisaged that the new engine *(which is* smaller and lighter than current equivalents) would be launched first in Europe, but a rapid build up in U.S. demand for this type of engine means that there may be a simultaneous launch.

In the United States, Cummins has also been co-operating with *the tractors and farm equipment* company J. I. Case in the development of a new engine in the lower horsepower range, which would be used for Case's range of equipment. Cummins is also working on the design of a diesel engine for cars, on behalf of Ford, which will manufacture them.

These developments tend to support the theory that major engine companies with large resources, such as Cummins, have a big advantage in development of new products,

While this may be true, there are powerful companies in Continental Europe producing engines and trucks, such as Fiat, Berliet (part of Renault), Daimler-Benz, MAN, Daf, Volvo and Scania, which all make their own diesel power units.

Trend

But in Britain truck manufacturers such as Bedford, Foden, Ford, BL, ERF, and Seddon Atkinson all use bought-in engines to a lesser or greater extent, and it is certainly unlikely that they could ever meet their own engine needs.

Cummins believes that high investment costs in new engines means that specialisation will be the name of the game in coming years, and this has happened *to some extent already,* with certain companies increasing their grip on particular sections of the market, based on engine sizes.

Perkins, identifying what it regards as a strong growth sector, is to go ahead with the development of a high-speed, light diesel engine which would have dual application in cars and light commercial vehicles.

However, Perkins would like to reach an agreement with a big motor manufacturer to assist in the very considerable development costs, certainly upward of £30m, and for the manufacturer to take a proportion of production. It is evident, however, that the area of cars and light vans will be one of tough competition, since Britain lags behind other European countries in this application of diesel engines.

For Perkins, the problems of its North American parent have a bearing on its future development, since there have been suggestions that a minority in*terest in the UK subsidiary may* be sold off. Should this occur, it could be a source of additional funds for investment.

Nevertheless, Perkins remains the world's biggest manufac*turer of diesel engines within* the 30 hp to 500 hp category, followed by Daimler-Benz and Ford, Isuzu, General Motors and Fiat, according to the latest figures. More than a quarter of Perkins' output went into commercial vehicles.

The presence of that number of commercial vehicle manufacturers in the top six engine producers indicates that the development costs of engines have not yet had the impact which some had suggested would make them turn to other sources for engines.

Despite the rapid changes in the energy equation, the world diesel-engine market has traditionally been a stable one, with established patterns of use in vehicles which the truck manufacturers are hesitant to change unless necessary. Moreover, options of different engines con*tinued to be a selling point.*

In the UK market, L. Gardner is also planning investment in new products, although the company is cautious about revealing details. It reports that its output has increased steadily over recent years and that it will be keeping in step with the *demand for* units of greater power.

"We already adapt our engines to meet the require-customers, and intend to continue doing so," said a company spokesman.

Engine manufacturers have traditionally upgraded the engines they have on offer but have often done so with more regard for sheer power than for environmental considerations such as noise and smoke emission. But engine development has become more difficult for two reasons.

Buyers of heavy trucks are *now extremely conscious of run*ning costs, and engine manufacturers are aware that more stringent noise and emission standards cannot be too far off. Designers therefore have fairly limited room for manoeuvre with older engine models and their companies are thus forced into vastly more expensive, completely new engines.

As engine and truck manufacturers in Europe and the U.S. continue to involve themselves in a continuing series of tie-ups such as marketing and co-production deals, the major companies are fighting for a bigger share of each other's lucrative markets.

The developing world also holds great promise, particularly the newly industrialising countries, where licensing deals are likely to produce additional scope for engine sales.

Lorne Barling

Bus makers are optimistic

THE EUROPEAN bus and coach industry has four major manufacturers, each of them basically owing its position to its strength in its domestic market.

These four—Daimler-Benz in West Germany, Leyland in the UK, IVECO in Italy, and RVI (Renault Industrial Vehicles) in France—are followed in the league table by three other significant producers, MAN of West Germany, Volvo and Scania of Sweden, which have established their position mainly as exporters. Including Pegaso of Spain, Kassbhorer of Germany and Ford and Bedford in the UK, European manufacturers turn out about 30,000 buses or bus chassis a year.

Most producers believe that passenger transport will prove to be a healthy growth area for the commercial vehicle industry during the next few decades. This analysis is based on two basic observations. With the world population expanding rapidly, and concentrating itself more and more in big cities, there will be a big requirement for urban transport.

At the same time, the energy crisis is expected to give a big boost to public transport, both in the developing world where cars will remain a luxury, and in the more developed countries, where Governments will be promoting energy saving systems.

Because of these trends, commercial vehicle producers have committed significant funds to this sector over the last decade. Daimler-Benz, for example, has pressed ahead to become the dominant world manufacturer with an output of more than 7,000 units a year; Leyland has put money both into the highly automated single decker plant to produce the National range, and, more recently, into a new double-decker design; and RVI, following the merger of Berliet and Saviem, has decided to go ahead with an aggressive development policy designed to capture a significant position in overseas markets.

The main growth problem facing all of these national producers, however, is to develop products which break through the barrier of other countries' national regulations. The big companies have tended to concentrate their exports in the past on the developing world countries, where requirements are fairly basic and control of design features at a minimum. This means that costly design changes can be avoided. Thus Leyland, for example, has a strong presence in the former British colonial territories in Africa and the West Indies, and RVI in Francophone Africa. In Europe, the national markets have developed insular characteristics, and many details of vehicle design, such as safety features, have not yet been settled at a joint EEC level.

These markets also remain highly idiosyncratic. The best example of this is the use of double-decker buses in Britain, a characteristic of public transport in the UK which has never caught on in Continental countries, and to which most European cities could not adapt because of the design of their bridges, street signs and so on.

Markets

In addition to these more obvious features, most European markets have remained strongly nationalistic, partly because of the general desire to buy from home-based producers, and partly because municipal buyers want continuity of product for their fleets. The big exceptions to this rule are France, where importers have captured a large part of the coach and longer distance vehicle market, and the UK, where shortages of Leyland double decker output in the early 1970s led to a number of new entries to the market based on imported chassis. By contrast, West Germany remains a virtually closed market: the country has virtually no imports.

As in other industries, the West German producers have shown themselves to be by far the most vigorous European exporters, Daimler-Benz, for example, manufacturing about 7,000 vehicles a year in Europe (it is also a big producer of buses in its Brazilian plants) has pushed exports up to well over 60 per cent of output. An important proportion of this is in Europe, where Mercedes has been highly successful in the coach market, particularly in France. Up to 50 per cent of the company's sales, however, go into markets outside Europe. MAN, with an output of a little over a third of Mercedes' is also a big exporter to the third world.

The other most successful companies in Europe are Leyland Vehicles and IVECO. Both of these companies, with capacities of between 5,000 and 6,000 vehicles a year, continue to rely for a little over half of their sales on their home markets. But Leyland, despite its failure in Europe with other aspects of its business, has managed to find a solid foothold in the Low Countries, and has, in some years, sold well over 10 per cent of its production in Continental markets. IVECO, with its bus production based in Italy (another country with virtually no bus imports) is in a very similar position to Leyland in its EEC sales.

In addition to these companies, Volvo has also developed a strong position in Europe in the past few years, selling about half of its 2,000 to 3,000 annual output in the EEC. The Swedish company has achieved this by specialising in a range of chassis and engines which can be used by overseas bodybuilders as a base for vehicles of a local design.

The least successful exporter from among the large European producers is RVI. In 1977, for example, the company had a bus and coach output of about 2,900 vehicles, but virtually no EEC sales outside the borders of France. Total exports amounted to only about 12 per cent of output.

RVI has also failed, in comparison with other European producers, to protect itself in its domestic market. This is particularly true in the "autocar" sector for longer-distance vehicles not used exclusively in urban transport. In this sector importers have captured about 40 per cent of the French market. Even in municipal vehicles, where there are much stronger temptations for local authorities to buy the domestically produced product, Renault's share has dropped to about 87 per cent of total sales, while Mercedes has captured well over 5 per cent.

RVI is now taking steps to reverse this position of decline. Since the Berliet Saviem merger, it has taken the decision to support the public transport as a growth sector, and one in which it can clearly make profits—some one-sixth of the group's turnover currently comes from these activities at a profitable rate. Thus, the Berliet and Saviem ranges will gradually be integrated, new products introduced, particularly to attack the market for long distance coaches, and a more flexible policy developed towards the developing world.

The group's first priority will clearly be to stop the drift in its home market, where inadequate products in the longer distance vehicle sector have opened up opportunities to importers, particularly Mercedes. It will also be adopting a more aggressive policy within Europe, on the supporition that the market will gradually become less nationalistic, and it will be aiming to spread its interests elsewhere overseas.

In these areas, the aim is to become less dependent on Africa, and to begin to put down roots in other developing territories such as South America and the Middle East. For this reason, RVI is aiming to expand its range of chassis/engine units which can be adapted to a variety of markets.

Whether the European market remains large enough—or will become large enough—to support the ambitions of RVI and the other European producers remains open to question. All the latest forecasts point to a steady growth rate of roughly two per cent a year over the next decade from about 9,000 units this year.

But within this developed part of the world, production processes are becoming more and more sophisticated with the development of integrally constructed vehicles which can be put together by automated processes. This, in turn, means a more capital intensive industry which demands higher rates of investment and larger organisations to support—so there will be some pressure towards integration of resources among the manufacturers.

Lorne Barling

The transport industry is taking increasing interest in the articulated bus. Above: The Leyland/DAB model has undergone trials with several operators in Britain

Slow recovery for the trailer industry

DESPITE THE gloomy forecasts at the start of the year, British trailers manufacturers have experienced a buoyant market since then, although there are now signs that demand is slackening. Whether this is a seasonal factor or the beginning of a downturn remains to be seen.

Last year a total of 17,753 trailers were sold in Britain compared with around 18,600 in 1977, but first quarter figures for this year were more encouraging at 5,370 units compared with 4,764 during the corresponding period in 1978.

Both Crane Freuhauf and York Trailers confirm this trend, and are maintaining strong order books. However, Freuhauf predicts that there will be a noticeable decline in demand in the last quarter of this year and early next year.

Most manufacturers have been surprised by the strength of the market, considering that conditions were very similar to those following the 1973-4 oil crisis which had very serious medium-term effects on demand.

Export markets, however, have shown only slight improvement from the depressed level of last year, with the most promising areas being the Middle East and Eastern Europe. Nigeria, once a good market for York Trailers, has now become extremely difficult due to import regulations.

York now estimates that its total output, of which between 30 and 50 per cent goes in export, is now at around 85 per cent of the peak reached in the early 1970s, compared with a level of 50 to 60 per cent in 1975.

This indicates that the recovery of the industry has been painfully slow and buyers have only now recovered their confidence, as has been the case in most European countries. Higher fuel costs have been a discouraging factor, and York reports increasing interest in its trailer with Hobo suspension. This involves a lifting axle system which enables the operator to reduce costs when unloaded.

Costs

Manufacturers themselves faced considerable cost increases, mainly as a result of more expensive tyres and steel, the major input.

Freuhauf's approach to rising costs is a programme of standardisation of components among its European affiliate companies in Holland, France, West Germany, Sweden, Italy and Spain.

Although this is a long-term plan and presents certain problems due to differing national regulations on components, it will hopefully allow more flexibility in manufacturing. Suspension and brake parts are two early candidates for standardisation.

The European trailer leasing market, a good indicator of the immediate requirements of industry in general, has remained extremely buoyant and leasing companies claim that the trend from direct buying into leasing is continuing.

Transport International Pool, the biggest company of its type in Europe, said that its own buying of equipment to meet leasing demand is now at a high level and is likely to increase as new branches are opened in a number of European countries.

The hope of the leasing companies, which include those wholly owned by the manufacturers themselves, is that when economic conditions create cash shortages and a cautious attitude to buying, leasing will continue to be seen as an easy alternative

One advantage which TIP enjoys as being an independent, U.S.-owned company is that it can offer a wide range of trailers from different manufacturers. At present it is offering 17 different types of unit and for contracts extending beyond two years the customer can give his own specification.

In the United States it is estimated that half the national trailer fleet is leased, while the figure is around 10 per cent in the UK and perhaps 25 per cent in Continental Europe. However, these proportions are clearly rising and the future of leasing operations seems bright.

The new Conservative Government's attitude to road transport has so far been cautious and the inquiry set by the Transport Minister, Mr. Norman Fowler, promises to allow all sectors of the industry to express their opinions.

However, the Government is to propose a change in the arrangements for taxing trailers drawn by rigid vehicles. At the moment the trailer supplement

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COMMERCIAL VEHICLES XIII

New controls on body work

THERE ARE more than 300 companies building bodies for commercial vehicles in Britain. The variety of these bodies includes thohse for aircraft refuellers, ambulances and flat-platform trucks to those for mobile shops, refrigerated-insulated vans, demountable systems, and tipper trucks. The simplest body costs about £600 while the most expensive can cost the customer more than £15,000.

It is difficult to estimate what the market is worth because it is very diversified and localised. There is little body-building for export in the UK or elsewhere in Europe because the transportation of what are really empty boxes is expensive and manufacturerers are responding to specialised national (rather than international) need.

But it is a changing industry, primarily because of the shortage of skilled craftsmen, the costs of building, as well as new government and EEC legislation.

Mr. George Quayle, chairman of the national manufacturing council of the Vehicle Builders' and Repairers' Association—one of the two trade associations—says: "The market is expanding but it is becoming more and more specialised. This is because new regulations are putting more and more demands on the body-builder. This means companies are opting for more standardisation and increased specialisation.

"More sophisticated materials are being used to reduce the man hours required to build a body and because there is a shortage of skilled labour we are moving from the emphasis on the craftsman to the machine."

Regulations

New regulations affecting the industry in the past couple of years include health and safety legislation, while Type Approval is the latest EEC initiative. This will introduce uniform standards of body building throughout the Community.

Mr. John Muschamp, managing director of the Lancashire-based Coachwork Conversions is on the Ministry working party on Type Approval. He says that not much progress has been made yet on introducing the system into the UK, mainly because of problems over the type of approval, the monitoring of it and how to police it.

In Germany, the TUV — a semi-Government body — is responsible for issuing a Type Approval Certificate for every vehicle body manufactured. Mr. Muschamp said it was unlikely that a system similar to that in West Germany would be introduced in Britain. In some other EEC countries the system is operated by Government departments.

He said: "Full Type Approval of the body is still some years away and it only applies to specific items. However, UK manufacturers are concerned about its introduction. It could polarise the market and have serious repercussions on the smaller builder.

"At the moment it is sensible for manufacturers to look at how the regulation is affecting Continental builders and steer in that direction." His company has designed its drop-side vehicle with EEC regulations in mind.

Coachwork Conversions is relatively young. In the 1960s it entered the industry with the then virtually unheard-of idea of marketing a standard body. It now specialises in volume production of standard bodies up to 7.5 tonnes gross. It markets the body as a standard package to its dealer network.

Its products include the alloy and GRP ply box (glass reinforced plastics), Luton and walk-through commercial vehicle bodies, a range of insulated bodies; drop-side and tilt trucks, milk floats, and some special purpose bodywork.

Mr. Muschamp says: "We do not employ highly specialised body builders. We design and assemble on jigs—contrary to the practice of most body builders. Turnover at the company for this financial year was £2.5m—a 20 per cent net increase on last year.

At the other end of the market is the Edbro group which is the UK's leading manufacturer of tipping gears and hydraulics systems. It is one of the few UK companies which can supply a sophisticated package of bodywork plus hydraulic equipment. It produces demountable tipper body systems (bodies which can be unclipped from the chassis) aircraft servicing trucks, tailboard lifts, waste compactors and machine tools.

The company merely produces bodies which are associated with its hydraulics activities. It is the biggest tipper-lorry manufacturer in the UK and reported a turnover of £32m in 1979 with its pre-tax profit, however, slightly down this year — just over £3m compared with £3.6m last year. The company exports a large percentage of its tipping gears and it explained the fall in pre-tax profit as partly the result of the transport strike earlier this year and the continued strengthening of the pound, particularly against the U.S. and Canadian dollars.

it is in effect a method of making the rigid vehicle as efficient as the articulated.

However, manufacturers such as Abel Systems, Dobson Hydraulics, Crane Fruehauf and Edbro have not yet agreed on compatible systems. This happened with articulated lorries in the early years of production and the industry expects a similar initiative to take place. The efficiency of the demountable unit is demonstrated by that specially constructed for North Thames Gas. A demountable body containing a workshop can be simply transferred to another chassis if one truck breaks down, thus keeping the workshop constantly on the road.

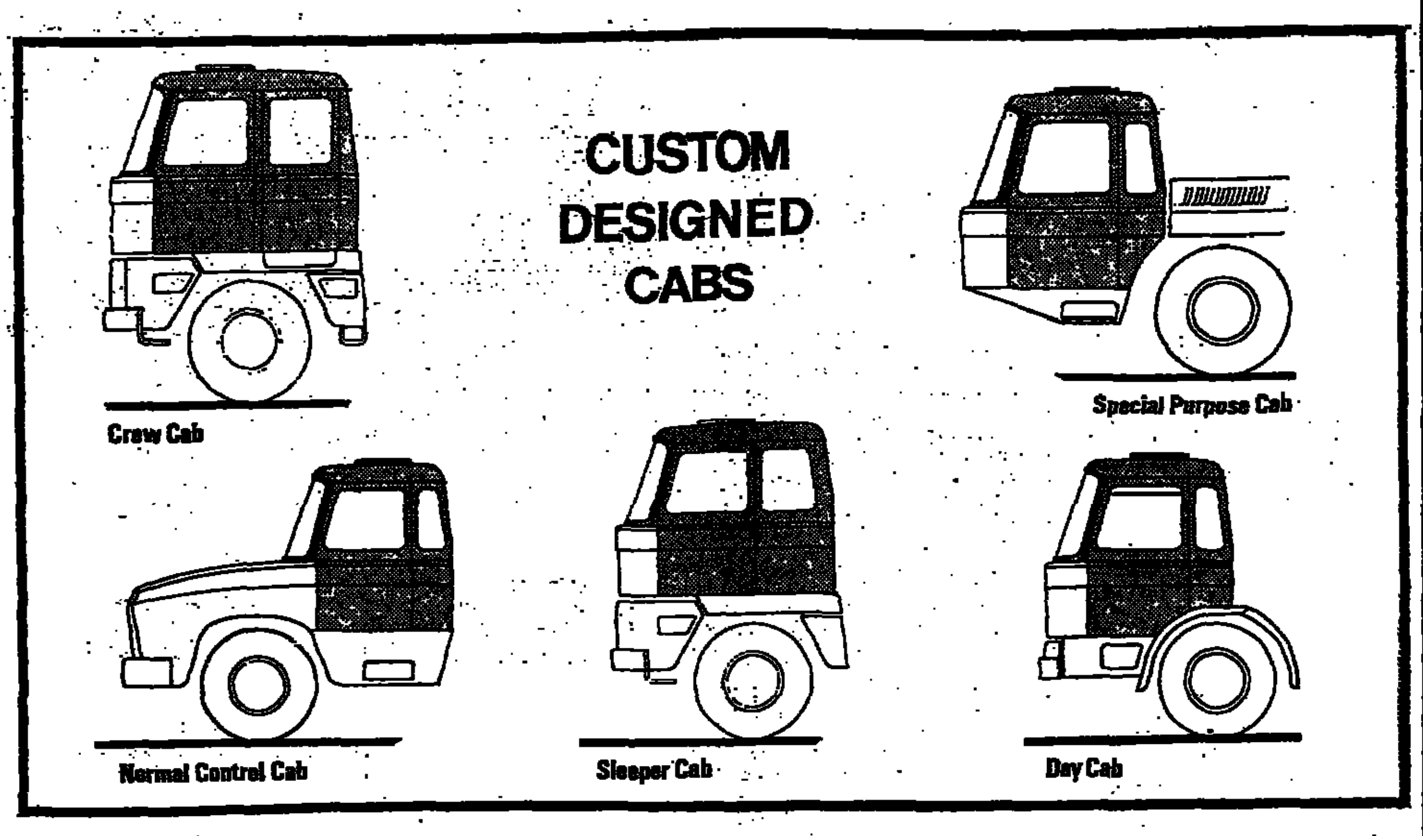
Crane Freuhauf, the largest trailer manufacturer in the UK, entered the body-building market eight years ago when it bought the Basildon-based Imperial Coach Works. The company said it did this as a logical diversification of its activity in the road transport industry. Until then it had made trailers and containers.

It now makes the body work for dry-freight and refrigerated vans, de-mountable systems for both rigid and articulated vehicles as well as tipping trailers—it buys the tipping gears. It is active in the entire rigid market—from 3.5 to 28 tonnes. In unit terms it has about 14 per cent of the body building market.

Being part of the large Fruehauf Corporation of the U.S., the UK company is able to draw on international expertise in exploring the problems of type approval. Its standing engineering committee is at present examining these problems, while a special department was set up within Crane Fruehauf to deal with government regulations. The company says: "Regulations are becoming an increasing problem but it is the smaller companies which will find the greatest difficulties."

As one member of the industry says: "Some bodybuilders are like blacksmiths and they could not afford the time to read all the new legislation, never mind implementing it."

Lisa Wood



The Standard Panel concept of Motor Panels (Coventry), a Rubery Owen subsidiary, was a Design Council award-winner this year. The concept enables a wide range of truck cabs to be offered for customers to adapt to their particular needs. The judges described the system as "ingenious"

Trailer industry

CONTINUED FROM PREVIOUS PAGE

increases with the weight of the towing vehicle up to six tonnes and is constant thereafter.

As it does not vary with the weight of the trailer, a goods vehicle towing, say, a small generator pays the same as a similar vehicle towing a 12 tonne gross weight draw bar vehicle.

The Government therefore proposes that vehicles over 12 tonnes gross weight should pay a supplement in respect of trailers designed for the carriage of goods if the trailer is over nine tonnes gross weight. Initially at least, the supplement would be at a single flat rate.

Overall the proposed taxation changes are aimed at making heavy goods vehicles provide a fair contribution in taxation to offset the road costs they incur. However, the tractive unit and the semi-trailer will be taxed as a combination with two sets of scales, for two and three axle tractive units.

An operator, when licensing his vehicle, will need to decide what combination of semi-trailers he wishes to be free to use. The licence disc will indicate the number of axles on the tractive unit, the train weight of the vehicle, and the minimum number of axles permitted on the semi-trailer.

An operator whose vehicle is being used (laden or unladen) with a single axle semi-trailer, but which is licensed only to be used with two or three axle semi-trailers will be committing a tax offence.

However, there are some advantages which will be attached to the use of vehicles with retractable axles. These would be liable to pay tax at the appropriate rate for the most damaging number of axles used when the vehicle is partly or fully laden.

Thus, an operator who uses a two-axle semi-trailer laden or partly laden with an axle retracted for part of the time will be liable for tax at the basic rate scale. If, however, he undertakes only to use the axle retracted when the vehicle is completely unladen, he will be able to tax the tractive unit at a concessionary scale.

These and other fairly complex Government proposals are now subject to discussion within the various industries concerned, but it is clear that the Government will take a tough line on relating axle use to taxation. This may mean that more trailer manufacturers will begin offering retractable axle versions, or make other changes tailored to meet requirements.

Lorne Barling

Breakthrough in truck gearbox battle

THERE WAS a considerable breakthrough in what might be described as the truck gearbox battle being waged in Europe at the recent Frankfurt Show. Daimler-Benz announced it will offer buyers of its new generation of heavy trucks the option of having an Eaton Fuller gearbox.

Daimler-Benz traditionally has used its own gearboxes or those of Zahnradfabrik Friedrichshafen (ZF) in its truck range but has been forced by customers in Australia and South Africa to offer the Eaton Fuller box for some time. Now the pressure in Europe has built up so much that Daimler-Benz, almost the last of Europe's heavy truck makers to work with Eaton Fuller, has capitulated. And the commercial pressures must have been considerable for the group to consider using a major component from a U.S.-owned multinational rather than one from a neighbouring German group.

Difference

The difference between the Eaton Fuller gearbox and those offered by Daimler-Benz itself and by ZF is that the Fuller does not have synchromesh while the other two do.

And there is a growing number of truck drivers and owners in Europe who prefer a non-synchromesh gearbox.

The advantages claimed are that an experienced driver finds it takes less physical effort to use a non-synchromesh box. Drivers themselves say the box allows them to keep the engine revving hard and thus to keep the truck moving more quickly—particularly when climbing hills with a heavy load. There is also the "macho" element. Being able to use the non-synchromesh box sets a professional driver apart from the average man who would not be able to handle a truck incorporating one.

As for the truck owners, many maintain that because the mechanisms of the non-synchromesh boxes are more simple and have fewer moving parts they give less trouble and last longer. A non-synchromesh gearbox can be expected to last as long as the owner would want to keep a truck from new. Against this ZF points out that 60 per cent of European trucks are delivered with synchromesh gears and, far from demand swinging away, the percentage is growing.

In the U.S. the truck market is 100 per cent non-synchromesh but the individual European markets differ considerably. For example. Sweden is exclusively synchromesh, mainly because the two local manufacturers of trucks. Scania and Volvo, are dedicated to producing their own drivetrains (engines, gearboxes and axles) and make very good synchromesh boxes. But Holland is nearly 100 per cent non-synchromesh.

Daimler-Benz says that one important reason it now can offer the Eaton Fuller box as an option is that continuity of supply is assured since Eaton Fuller's new plant at St. Nazaire on the French Atlantic coast is fully on stream.

The St. Nazaire facility represents a £12m gamble by Eaton Corporation that the swing to non-synchromesh gearboxes will continue. And also that truck assemblers will more and more buy major components from outside specialists instead of making them at their own factories.

A number of factors are forcing this latter change, not least the cost-savings of purchase from a specialist volume producer and the ability to divert investment to more urgent and rewarding areas.

Nobody expects the change to be very rapid. With many thousands of jobs still dependent on the manufacture of in-house engines, gearboxes, axles and so on—let alone the huge capital investment wrapped up in existing plant and equipment—the switch to bought-out components must be carefully timed to allow existing labour to be diverted to alternative work.

Since the mid-1970s sales of Eaton Fuller boxes in Europe have grown rapidly. Output rose 20 per cent in 1978, for example, and is expected to grow by a further 15 per cent this year.

Even so. St. Nazaire added capacity for another 36,000 units a year to the 60,000 Fullers which can be built at plants in Manchester and Basingstoke in the UK and represented major expansion by any definition.

Since the product was first created in 1959, well over 1m Fullers have been built. The system proved so successful that Eaton used it as the basis for the truck industry's first universal heavy duty transmission available and interchangeable worldwide.

The St. Nazaire products are interchangeable with those made in Manchester and Basingstoke; in the U.S. at Kalamazoo (Michigan), Shelbyville (Tennessee), Shenandoah (Iowa), and King's Mountain (North Carolina).

So the Daimler-Benz transmissions will not necessarily be built in St. Nazaire, it is just that the French plant has eased supply constraints in Europe.

Apart from competition between non-synchromesh and synchromesh gearboxes, Eaton also faces competition from another U.S. group which is fast-growing in Europe: Dana.

Dana claims to be the broadest-based automotive components supplier in the U.S. but freely admits it is still in a "formative" stage in Europe. The group delayed its push deliberately because it knew it would require a manufacturing base in Europe and yet Europe was not ready for the product it had in mind—a non-synchromesh heavy truck transmission.

Fortunately for Dana, Eaton Fuller has gradually changed European minds. Seven years ago Dana started its build-up with the acquisition of one-third of the equity of Turner Manufacturing in the UK and last year mopped up the rest.

Full control was necessary because Dana will use Turner as the manufacturing base for its drivetrain components, including non-synchromesh gearboxes.

Turner will make gearboxes in the small and medium-sized ranges complementary to the big ones made by Dana elsewhere. Some of the Turner boxes are destined for export markets, Latin America in particular.

In the U.S., Eaton Fuller has around 68 to 70 per cent of the heavy truck gearbox market and Dana 10 per cent with the in-house boxes made by Mack Trucks accounting for the rest.

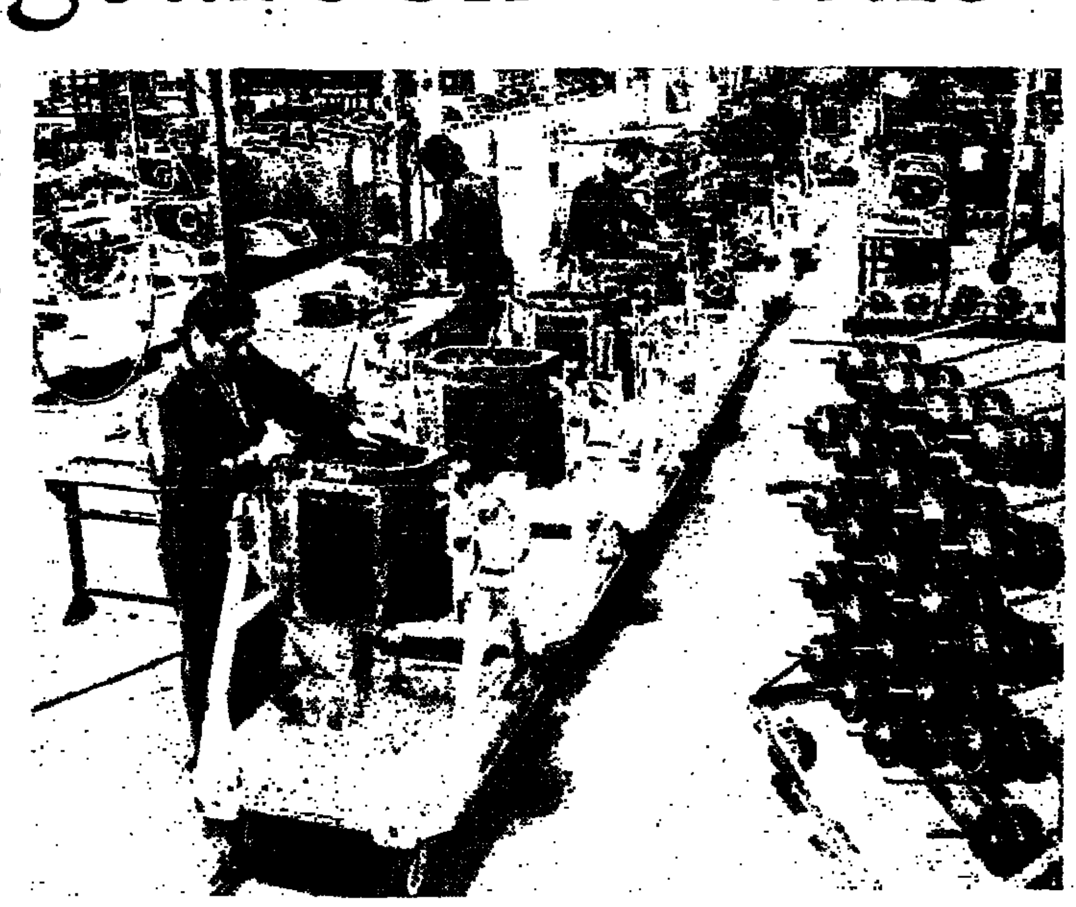
"But whether there is room for Eaton, Dana and in-house gearboxes in Europe is debateable," comments Mr. Eduardo Rosenberg, general manager of the Eaton Corporation Transmissions Operation-Europe.

And there is another potential threat in the future—from automatic gearboxes. At present, these are used almost exclusively by passenger transport vehicles operating in large cities where much starting, stopping and creeping in traffic is involved.

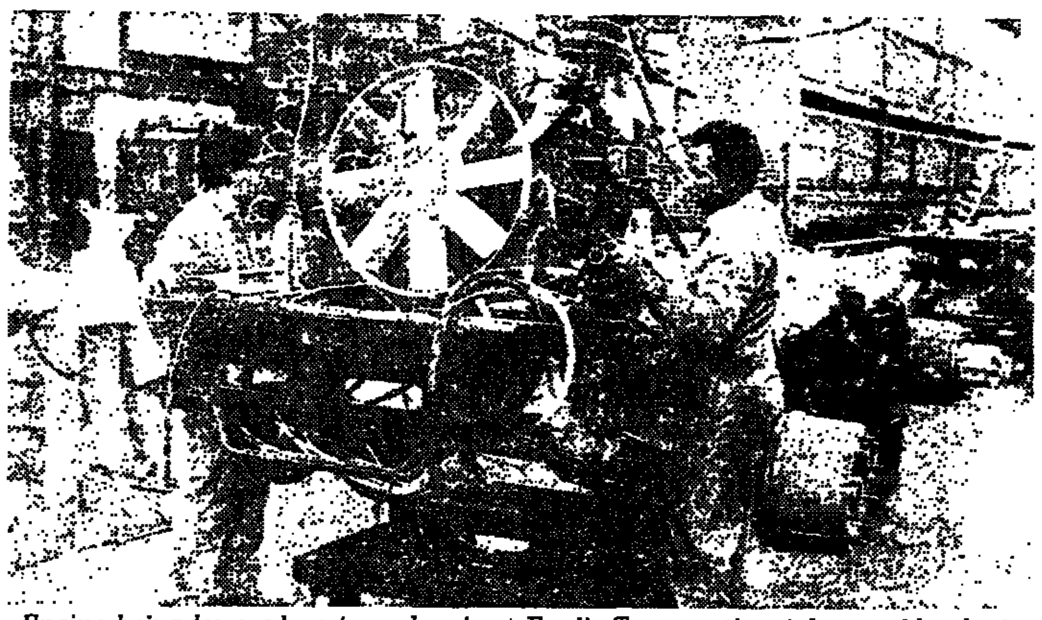
But there is some support for the theory that automatics will be adapted by heavy trucks to some extent in the future.

Just to complicate matters a little more, ZF has recently set up operations—a small toehold—in the U.S. Taking on the Americans in their own territory perhaps. As Europe's biggest truck component group, with a turnover this year expected to be DM 2bn (£500m) and with a DM 800m (£200m) investment programme running between 1977 and 1979, ZF is making a brave move. But the fact that Daimler-Benz is putting in assembly facilities in the U.S. obviously has a lot to do with ZF's action.

K.G.



Part of the assembly carousel at Eaton's new transmission plant at St. Nazaire, France



Engine being lowered on to a chassis at Ford's Transcontinental assembly plant at West Haven, Holland

Rapid growth continues in leasing sector

DESPITE THE strictures of the Governor of the Bank of England, Mr. Gordon Richardson, on the subject of leasing, this method of acquiring commercial vehicles without large capital outlay continues to become more popular.

Mr. Richardson addressed his recent remarks mainly to the banking community, which he said should consider more closely the risk element involved in leasing, for both parties to a contract.

"These risks," he said, "include the basic credit risk to the lessee, and the risk of ignoring that the deferred tax liabilities of the lessor may become payable—for example, if it proves to be impractical to maintain the level of new leasing, and, for operating leases, the risk that residual values will be significantly lower than expected."

His views, were prompted by the very substantial growth of the industry in recent years, and one need look no further than the commercial vehicle sector to see what he means.

Figures from the Equipment Leasing Association show that assets in the form of commercial vehicles acquired by its members amounted to £58m in 1976. £114m in 1977 and £158m last year. Assets owned by these members in the form of commercial vehicles totalled nearly £500m at the end of last year.

Although this growth is not as startling as that of the car leasing sector (which started from a low base in 1976), it has significantly raised the proportion of vehicles in the national fleet which are leaser rather than owned.

It is therefore of considerable importance to those involved as lessor or lessee of commercial vehicles that this expansion of the industry has led to a widening debate and official concern. It is the fear of the financial instability that widespread leasing could cause which has prompted the discussion.

Viewpoint

The chairman of the Equipment Leasing Association, Mr. Tom Clark, said recently in the association's annual report that demand for vehicle leasing was especially strong, but there is evidence that the tax changes designed to curb car leasing could have some effects on the commercial vehicle market.

This is because the major finance companies, headed by Lombard North Central, Barclays Mercantile, and Midland Montagu Leasing, are likely to be faced with increased competition among themselves with the decline of car business.

It is also clear that the move on cars, which virtually restores the position to what was originally planned with the framing of legislation, is unlikely to be isolated. The Inland Revenue is looking at the whole matter of leasing in the context of tax avoidance.

The debate about the reasons for the growth of the leasing industry has hotted up recently, with the Equipment Leasing Association playing down the importance of tax in the increase of leasing arrangements.

The response of Mr. Clark to the concern is one of optimism. He believes the industry has taken the necessary checks to see that leasing managements are sound, and that the leasing business equates to medium-term loans. He points out that leasing companies are not, as in the case of a bank overdraft, looking for repayment on demand.

The essence of leasing is a split between the ownership and use of assets, whether it is vehicles, cars or aircraft. The purchasers of leased assets, the lessors, have legal title to the goods. This brings with it the right to all the capital allowances available under the UK tax system. Since 1972 it has meant the right to claim tax relief for 100 per cent of the cost of assets in the year of purchase.

As a result, there remains a considerable incentive for all businesses with taxable profits to become lessors. The principal operators are, of course, the banks, generally operating through finance house subsidiaries.

Advantages

However, the practical advantages to industrial companies, particularly when bank credit is tight, is that they can effectively acquire capital equipment without incurring debt, visibly at least.

Opinion remains divided on how far companies have on average been able to extend their borrowing facilities through the use of leasing, or whether it is likely to have any detrimental economic effects.

It is clear that the Bank of England's principal concern is that there are a number of somewhat inexperienced leasing companies operating in a fast-growing financial sector, and in the event of a casualty, either through a lessee going bankrupt or an asset being destroyed, where the lessor's contract proves defective, there could be a loss of confidence.

Taking the pessimistic view, this could result in a rush from the market-place and a market imbalance which could bring a deluge of tax bills.

The Equipment Leasing Association is also aware that the growth in business led to more non-financial institutions providing leasing facilities. "This is a natural development and one which has already taken place in the United States," comments an association spokesman.

The association emphasises that in the UK many of these companies are advised by the ELA and believes that this sector of the industry is soundly managed.

"Rapid growth is characteristic of a new and vigorous industry. As an established primary source of equipment finance, we believe that leasing finance will continue to grow in the coming decade, but at a slower rate than we have seen in recent years."

The expansion has in fact been extremely fast and it is now estimated that annual turnover could be as high as £2bn and the Inland Revenue believes that about 15 per cent of this activity is motivated solely by the desire to reduce tax bills.

The nature of leasing, however, is such that while companies can reduce their tax outgoings, there is a tendency for companies to go on leasing at an increasing rate to maintain their position, leading to the criticism of the treadmill effect that follows.

The official policy of the Equipment Leasing Association is that leasing companies should make full provision for taxes deferred at any particular time, making the eventual payment of the whole bill more bearable.

Although this may not be of immediate concern to a company considering the option of truck leasing, it is clear that after the unhindered growth of recent years, the leasing industry is now being forced to take stock of its position.

Many companies which have heavily committed themselves to the leasing of commercial vehicles must therefore be aware that there could be changes which will have an important bearing on their activities.

While it is clear that the Government is unlikely to take any action which would seriously upset a very large and important financial sector which provides a wide range of capital goods for industry, there may be further efforts to restrain some activities.

Lorne Barling

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Rising costs hit hauliers

THE SMALL haulage companies which felt the worst effects of last winter's strike by lorry drivers, have also been the worst hit by the rapid rises in operating costs that have taken place since the strike.

The vast majority of companies in the domestic and international haulage business could be classed as small companies. There are an estimated 46,000 haulage companies operating in Britain and 45,000 of the companies have fewer than 20 vehicles.

However, the proliferation of companies in times when revenue is under pressure has had a major effect on the nature and structure of the general haulage trade in Britain.

British Road Services, part of the National Freight Corporation, and one of the largest groups, has reduced the proportion of its business which comes from general haulage. An unwillingness to compete against the one-or-two lorry company is certainly one of the reasons for the change of emphasis.

BRS is moving away from the "spot" business, the bread and butter of the small haulage company, to work negotiated under short- or long-term contract.

Two years ago, 45 per cent of British Road Services' turnover came from general haulage. Last year the company's move away from the "spot" market, resulted in the general haulage activities accounting for 42 per cent of the turnover of £126m.

This year the plan is to reduce the general haulage interest to 40 per cent of turnover as part of a move towards cutting general haulage to about a third of turnover, or even less.

In contrast, the company's contract hire and truck rental activities have all been increased at the expense of conventional general cargo. Also the company has developed other activities, such as its BRS Rescue service, which is open for all hauliers. The move marks a novel step towards revenue earning from sources which are outside the traditional business of hauling other people's goods.

Mr. David White, the managing director of BRS, is largely responsible for the shift of emphasis. He has guided the company into increasing profits and turnover for the past three years and last year returned in a trading profit of £6.8m, which yielded a net profit of £2.4m.

However, it is the small haulier, unable to change in such radical ways to counter inflationary and other cost pressures, that has the most difficulty surviving in today's market.

Labour costs and the rising cost of diesel fuel are the two main components which have accounted for the swift rise in hauliers' operating costs this year. The Road Haulage Association said in July that road haulage operating costs had risen by 17.5 per cent in the first six months of the year.

In the same period last year the increase in costs came to 5 per cent and for the whole of 1978 the rise was 11 per cent.

Increases

The cost increases came sharply at the beginning of the year and in the few weeks between January 1 to February 20, costs had risen by over 10 per cent.

Labour costs accounted for 9 per cent of the latest total rise in the first six months, followed closely by the rising cost of diesel fuel, up 5 per cent.

Other costs, including vehicle replacement costs added the remaining 3.5 per cent.

The increase in labour costs is likely to have a particularly serious effect on the smaller haulage company where the number of employees is increasing. The Road Transport Industry Training Board, in a survey last year, showed that the average number of people employed in a road haulage company had risen from 18 to 25 employees.

The Board's survey showed, however, that there was a prospect in the 1980s of more stability in the industry's employment pattern than for some time. Little growth in numbers is expected before the early 1980s.

But after the early 1980s, the Board said it expected a return to requirements for drivers similarly to that of the early 1980s. The impact of larger vehicle capacity on demand for heavy goods vehicle drivers would, however, be offset by adherence to more stringent European Economic Community hours and travelling distance regulations.

The Board said that the combined effects of permanent involuntary wastage of drivers and promotions and an assumed national economic growth of 3 per cent per year would lead to a total requirement of novice drivers averaging 12 per cent per year of the heavy goods vehicle driving force by 1985.

The road haulage industry also came under scrutiny last year from the Price Commission. The Commission's main conclusion, that road haulage charges should not be increased in the next year (1979) by more than the rise in the rate of inflation met with a vehement reaction from road hauliers.

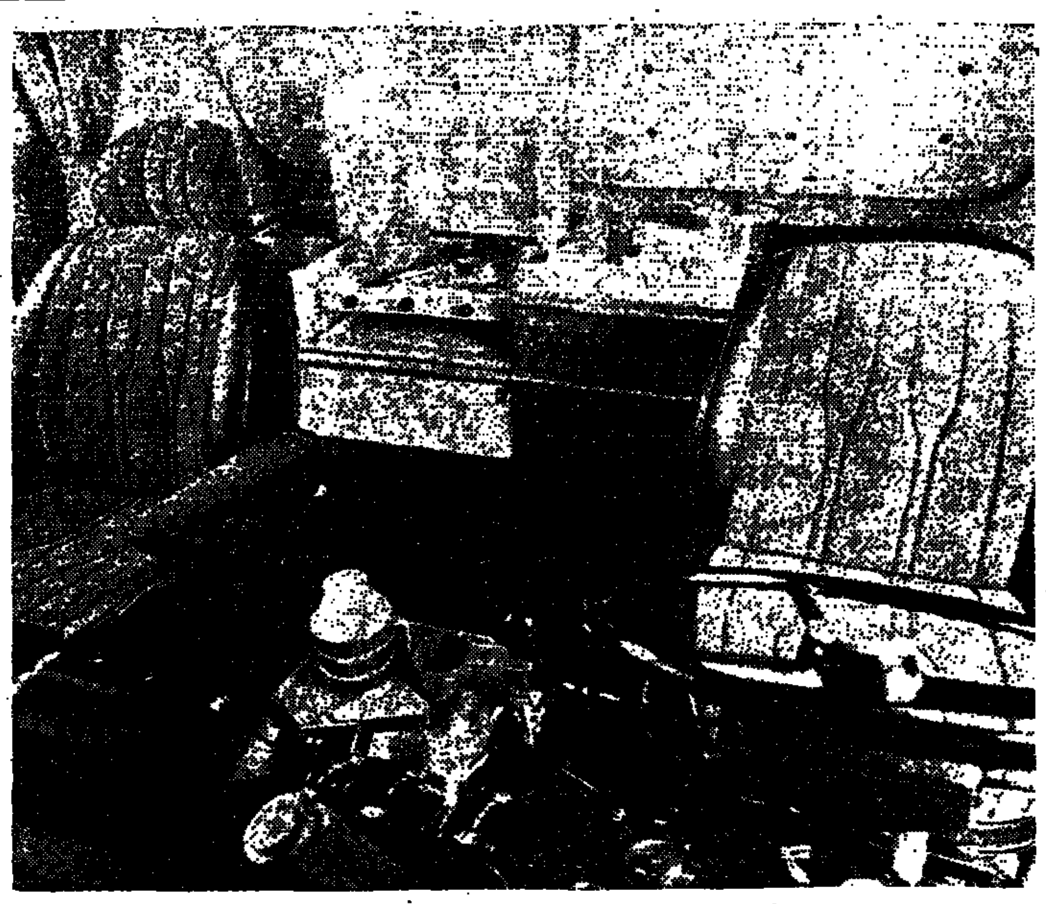
The rise in charges this year have so far been well in line with inflation if not ahead of it and the total increases, bearing in mind the high wage settlements of around 22 per cent, are certainly likely to be ahead of the rate of inflation by the end of the year.

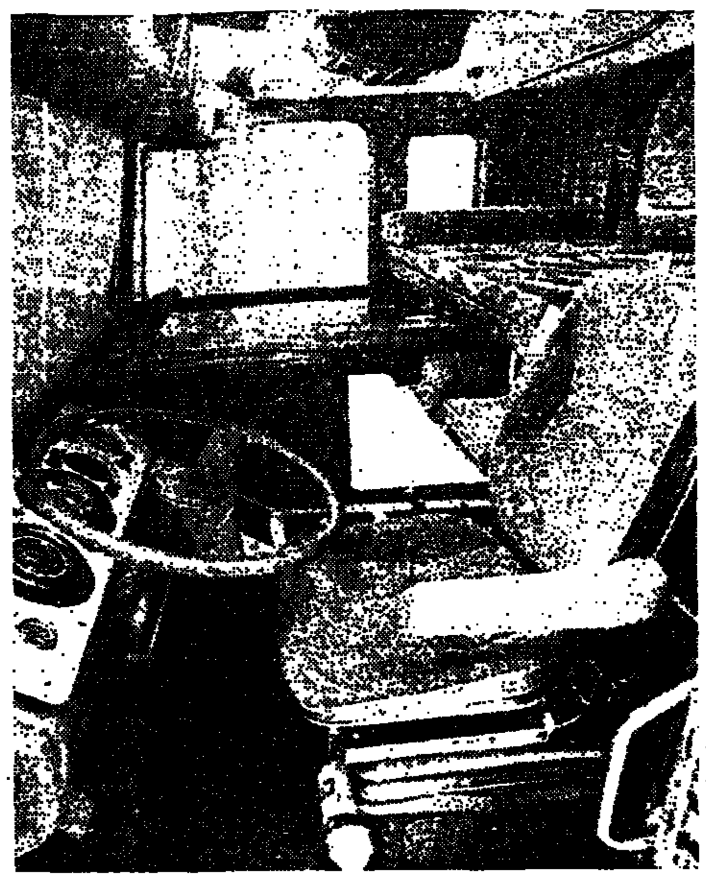
But high wage settlements, where they are not linked with productivity, are equally certain to have a major and possibly damaging impact on the fortunes of the small haulier. Wages paid by road haulage companies increased substantially faster than the industry's turnover between 1975 and 1977, according to a study from Inter-Company Comparisons published earlier this year. Employees' pay in the period rose by 42.4 per cent compared with a 35.4 per cent increase in turnover, which was generally in line with inflation.

However, the survey showed that the industry was gradually recovering from the low-point of 1975-76. The average pre-tax profit margin of the companies sampled rose from 3.1 per cent in the trough period to 4.7 per cent in the following year.

Nevertheless, liquidity remained a problem for many of the smaller companies and obvious improvement would be for companies to shorten credit periods for customers. But it may not be easy in a period when there is intense competition in a market determined by the fortunes of a sluggish manufacturing sector.

Lynton McLain





An example of what can be achieved in cab comfort in a Leyland Marathon (left)—this cab was originally completed as part of an exercise for trucks involved in Middle East operations. Right: from arm-chair comfort in Bedford's TM long-haul vehicle, the driver has access, via a sliding panel, to a cold box: The cab has fluorescent lighting at night and privacy is provided by roller blinds and one-way glass

New concepts in cab comfort

IF THE design concepts for cabs intended for long haul lorries are anything to go by, the modern truck driver is destined to become the world's most pampered creature on four wheels.

For example, Bedford's TM long haul "concept" vehicle, which will never go into production in its present form is typical of the ideas to make long distance travelling more comfortable.

Apart from being fitted with extremely comfortable beds, cabs will also include a refrigerator and/or deep freeze, stocked full of food, a microwave oven to cook it in, a sink with hot and cold water and stereo radio and tape cassettes to keep him, or her, company during solitary journeys.

Providing a driver with the means of self-sufficiency is important when driving in the developing countries where suitable facilities may be few and far between. A driver seldom needs to leave his vehicle unattended or worry about finding a bed for the night.

The reality of cab design is not so very far behind the Bedford concept vehicle or indeed any other of the commercial vehicle manufacturers' similar projects. Leyland Vehicles' Marathon 2, which was introduced a couple of years ago, included such facilities as a fold-up bed, and a cooker.

But vehicle designers have also been taking steps to improve the overall environment in which the cab driver has to spend the majority of his time.

These steps have included the reduction of noise within the cab itself by improving insulation. This has been achieved by installing sound absorbent linings in the roof and rear panels. In the Marathon 2, for example, noise is partly isolated from the cab by a rubber/foam sandwich blanket bonded to the engine tunnel.

In addition, energy-saving measures such as the use of thermostatically controlled radiator fans also minimises noise since the fan is only operating for a small percentage of the time while the engine is switched on, instead of working continually.

Design

Ergonomic design of the controls and instruments is becoming an increasingly important feature of the overall cab design. Most manufacturers have groups which specialise in studying the problem of reconciling human needs and abilities with the functions of the cab.

Originally, designs were only aimed at the male population but over the years there has been an increase in the number of women who take up truck driving. This means that controls have to be more responsive to a lighter touch, foot pedals and gears have to be positioned to suit a wider variation in leg and arm lengths.

Thinking on the positioning of instruments is also changing so that manufacturers are now tending to place the most referred to instruments in the most assessible positions.

Ford's Transcontinental model, for example, also includes pre-journey check switches into the header bar for oil and coolant levels so that this does not interfere with the driver, once underway. If an optional return electrical system is fitted, an additional switch and two warning lights test for short circuits in the electrical systems.

The instruments panel in Leyland's G-cab model (fitted to its medium/light truck range such as the Terrier, Boxer, Mastiff and Supermastiff) has been redesigned so that the speedometer/tachograph is now sited directly in front of the driver. View of the instruments are unobstructed by the steering wheel which only contains two spokes

Much effort has gone into cab and seat mounting to reduce vibration which makes drivers tired and may cause damage in the long-term.

Manufacturers believe that they still have a long way to go in this field of development but some ways of lessening the effects of vibration include suspending the cab instead of connecting it directly to the chassis.

A practical example of this is the Transcontinental which has a fully suspended tilt cab and even the driver's seat can be suspended, if required.

Elaine Williams

Decline in major road projects

THE 1973 oil crisis dealt a heavy blow to motorway development in Europe from which it has not since fully recovered.

The effect of price rises was double-edged. It created, on the one hand, serious constraints in national economies which made it much more difficult to finance wholesale motorway construction of the type which had gone on in the boom years of the 1960s. With reduced economic activity, they were not, it could be argued, so necessary. On the other hand, it called into question the creation of roads which would, in effect, encourage the use of more and more fuel.

By this period, however, the main axes of the European network were already in place. In northern Europe, the heavy industrialised areas of the Rhine valley were linked up with a complex network of routes.

Holland, Belgium and Germany had constructed the roads which underlined their commercial interdependence within the Common Market, along with the enormous development of Rotterdam as the main entrepot in this region.

Systems

Italy also disposed of an extensive system, and France had constructed the most important connecting links with the north German plan and with Italy, parallel with the extension of its own internal system.

Thus, by 1975, Western Europe had a network of a little over 20,000 kilometres, including Britain and Spain, but not Denmark and the Scandinavian countries. The leader by far in construction was West Germany, with 6,071 kilometres, followed by Italy (with 5,176), France (2,830), the UK (1,870), Holland (1,512), Belgium (1,000), Spain (730), and Switzerland (628).

Since then, the main building activity has been in France and Spain, where programmes were cut back less dramatically than elsewhere because of the need to catch up with the rest of Europe — Spain, for example, has aimed to continue building at the rate of about 300 kilometres a year.

By the end of this year, France should commission its 5,000th kilometre of motorway, and within a year or so, if present plans stand up, it is expecting to move ahead of West Germany with the longest length of finished motorways in Europe.

The effect of Europe's post-war construction effort has been to give it the most sophisticated road network in the world on some measures. While the U.S. boasts much longer roads (a network of 56,000 kilometres), and far more per inhabitants (0.27 kilometres per 1,000 head of population against 0.06 per 1,000 in Europe), the density of Europe's roads is greater.

By 1975, the density figure had reached 6.05 kilometres per 1,000 square kilometres in Western Europe, compared with 6.02 kilometres per 1,000 square kilometres in the U.S.

These figures indicate the different requirements of the two continents and the greater concentration of industry and population in Western Europe. In northern Europe, for example, the network has become highly sophisticated to respond to the industrial needs of the area.

Initially, Europe's roads were not particularly designed with industry in mind. West Germany's enormous lead in motorway construction, for example, emerged in the 1930s, when motorways were embarked on for prestige, for strategic military purposes, and as a way of soaking up surplus labour.

By the end of World War Two, Germany already had 2,000 kilometers of motorway in place. Italy under the Fascist regime expanded its motorway network for similar reasons to Germany, setting off with a series of roads in the northern part of the country: the first motorway in Europe, in fact, was a toll road opened at the end of 1924 to link Milan with the Alpine lakes.

Other countries started their first roads with the aim of reducing traffic congestion around main cities as much as anything else.

These initial objectives were retained to some extent in subsequent motorway construction. But the big spur forward came in the 1950s, as a response both to rising car ownership and to industrial needs.

On the one hand, it became quite clear that the burgeoning vehicle population could not be accommodated on the road system as it then existed; on the other, industrial traffic needed better roads as more and more freight was switched from the railways following the stagnation of fuel prices and the comparative reduction in the price of road transport.

The development of increasingly heavy lorries throughout this period, the result of efforts to minimise fuel costs for the loads carried, also made better roads a necessity.

Since then, motorways have been developed as major weapons in industrial policy, creating faster communications and trade between different areas and opening up the more isolated regions within Western Europe. Pushing motorways into regions such as Scotland or Brittany in France is seen as a way both of giving these regions more outlets for their goods and of encouraging new industry to move in.

Benefits

The development of some car plants in southern Germany, for example, where the Government wanted new factories because of labour shortages in the north, has been encouraged by the presence of good motorway links. Similarly, the French effort to breathe new life into the old coal-mining regions of the north, or the declining steel-making regions of eastern France, has been accompanied by the development of new roads.

Germany and Italy maintained their lead in motorway building after the war, partly because they had got off to such a good start and partly because they needed roads to help with the reconstruction of the country. Italy, for example, had a poor ordinary road network to begin with and so pressed ahead rapidly with a more complex motorway system in the north and two great connecting routes down the east and west coasts of the country. Its main motorway construction effort is now considered to be virtually complete.

The two late starters in these developments were France and the UK, partly because they both disposed of fairly dense road networks in the first place or, in the case of Great Britain, a very extensive rail system. As so many other areas, France owed its traditional main road system to Napoleon: judged in terms of population, the country has some 1.5 to 2.5 times more roads per head than its nearest neighbours.

However, in the mid 1950s it became clear that this was not sufficient for the growing transport needs, and France embarked, in 1955, on its main motorway building programme (it had constructed only 25 km before that, to the West of Paris just before the war). The UK followed France by opening its first motorway in 1958.

The main initial effort in both these countries was to build north-south connecting links, onto which were added the east-west spurs. Thus, London was joined to the big northern industrial centres such as Birmingham, Liverpool and eventually Glasgow, while the French drove a road down from Lille in the north to Marseilles in the south. Lille linked conveniently in with the complex Rhine valley network in the Low Countries, while in the south a connecting link was pushed eastwards to meet up with the roads in northern Italy.

As in Italy and Spain (and now Greece), the main method of financing these new routes in France has been by way of toll systems, either run by mixed State and local authority companies, or by licensed private companies which receive a variety of financial assistance. Britain, along with Germany, Belgium and Holland chose to avoid tolls and finance the roads more directly from public funds. In the case of the UK, the money comes directly from general taxes; in the case of Germany, a certain proportion of road tax is set aside for motorway construction.

With the decline in really large-scale projects for new motorway construction, the accept is now being placed on improvement projects for existing roads. The Belgians, for example, have set in train a major series of projects of this kind, while in France, the regions of Britanny and the Auvergne, two of the more remote areas to the west and centre of the country, are scheduled to get improved road networks of this pattern. Given the constraints on public spending throughout Europe and the continuing energy shortage, this method of road development is likely to take precedence over motorway construction in the near future.

Terry Dodsworth

Scope for higher productivity

INDUSTRIAL RELATIONS in the country's truck and van manufacturing plants have this year largely maintained their *historical tradition of having* fewer industrial disputes and production interruptions than the car building factories.

A few plants have proved exceptions to this, however, and all manufacturers, not surprisingly, argue that there is considerable room for productivity improvements.

Strikes

In recent months the overall picture has been badly disrupted. Strikes within the car manufacturing operations of Chrysler and Vauxhall which have had repercussions on the commercial vehicle plants, special difficulties in one or two factories operated by Leyland Vehicles, and the national engineering dispute which has hit all these companies (mainly through its effect on component makers, though Leyland Vehicles has been affected directly) have all dislocated output.

In commercial transport, lorry drivers employed by member companies of the Road Haulage Association have taken their first steps towards negotiations during this pay round. National union officials say they are again in militant mood.

Tanker drivers are also due to submit claims for settlement in January and will be looking for big increases, possibly to catch up some of the ground lost against hire and reward drivers. Some of the major oil companies have been or are negotiating productivity deals for their drivers which might defuse possible confrontations.

Some explanation of past records of reasonable — in some plants very good — industrial relations appear to lie in the nature of the plants themselves and the work done in them.

They tend to be considerably smaller than the car plants, for example, and their work is less repetitive. Instead of a fast moving conveyor belt, production often has a much higher concentration of individual work.

Production workers are normally employed in smaller units than those in the car plants and can more readily see where their job fits into the whole. Partly because of this very little militancy has developed in these plants. A further factor is almost certainly the reasonable levels of investment and job security. Management would also argue that where it is generally satisfied with industrial relations this has resulted from years of hard work in improving relations with the shopfloor.

Ford's commercial vehicle operations at Southampton (Transit vans) and Langley (trucks) up to the July summer shut-down had exceeded total commercial vehicle production for the whole of the previous year (which included a nine-week strike). This has gone hand in hand with a smaller number of disputes than last year and no major strikes.

The company says it is too early to know whether its attendance payments scheme introduced as part of last year's pay settlement has contributed to this performance, although it believes and hopes it has.

One principal factor, however, has been the natural "withdrawal symptons" on the shopfloor following last year's strike. These symptoms usually manifest themselves in tighter adherence to agreed procedures and more consistent working.

Ford has got some overmanning problems and it says there are too many shopfloor infringements of agreed procedures. It is also finding it difficult to recruit enough workers for its Langley plant—a problem also affecting the Dagenham car factories.

Until recent disputes change the picture, Vauxhall had been well satisfied with its commercial vehicle output. August showed the second highest monthly production volume on record (highest was March 1973). The company says the Bedford was the top selling truck in Britain in August and that its recent record of industrial relations at its Dunstable operation can be compared favourably with any other commercial vehicle building plant.

The dispute at Ellesmere Port (which makes Chevannes as well as cars) over the company's 17 per cent pay offer seriously disrupted truck production at Dunstable and output of the HA and CF van lines at Luton. Considerable lay-offs at these two plants resulted from the action at Ellesmere Port, which produces components for Vauxhall's commercial vehicle factories in the south.

Chrysler UK says it has had no strikes this year in its commercial vehicle plants—Dunstable making Dodge trucks, Spacevans and the 50 and 100 series, Luton making components for these vehicles.

The company's commercial vehicle operations have been affected, however, by the troubles in the company's Midlands plants—particularly Stoke, which manufactures components.

Leyland Vehicles, which suffered a crippling strike at its Bathgate truck and tractor plant in Scotland last year, says that from the beginning of this year it has been hitting about 92 per cent of production targets—a level it considers satisfactory.

Performance has been badly marred by two recent developments, however. The engineering dispute has hit the company, a member of the Engineering Employers Federation, particularly severely, with management claiming production has been cut by about a half.

As a response to this, it has already warned its workforce that it will b ereducing next year's phase of its major investment programe in Lancashire and in Scotland. It is also closing down its Park Royal bus plant in North London following claims by Sir Michael Edwardes, BL chairman, that the workforce had deliberately hindered improvements in productivity.

Difficulty

Productivity has been a problem at the plant since production began last year of the new Titan bus. The management's desire to recruit a further 200 workers with skills different from those of the majority of the workforce has been an added difficulty.

Workers at the plant have accepted redundancy terms similar to those offered by BL at AEC's Southall plant in West London which closed during the summer.

The various regions of the Road Haulage Association have differing pay anniversary dates starting in the next month or two with Leeds and Bradford and moving on until January.

A delegates conference at Transport House will again set a national claim this year for negotiations in the regions. Shop stewards at Bradford and Leeds have already submitted a local claim for substantial rises and stewards in the Midlands are calling for a virtual doubling of basic rates following last year's 22 per cent settlement.

National union officials have indicated that the tacograph will not be used by them as a basis for productivity bargaining.

Nick Garnett

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World computer giant lets loose a cheaper and more advanced range. Max Wilkinson reports

The IBM tiger sharpens its claws

MOST of the world's computer companies must now be wondering anxiously whether they have made the right choice — to ride the IBM tiger or to hunt in different parts of the jungle.

The recent display of aggressiveness and power by International Business Machines has startled even some of its most anxious observers; and so has the financial bloodletting which resulted. IBM, with 64 per cent of the world's computer market and revenues of $17bn from data processing last year casts fearsome shadows over the product and pricing policies of every rival.

Competitors have been obliged to choose, therefore, whether to make machines which fit into the IBM scheme of computing, or to shun such perilous proximity by producing a completely separate system.

The companies which have received the worst mauling recently are those which moved during the last five years right into the heart of IBM's territory and, with a certain commercial impudence, have carried off business even from under the giant's watchful eye.

These companies, led by Amdahl and Itel of the U.S. have sold or leased machines which are direct substitutes for IBM computers but for a variety of reasons have been considerably cheaper. This policy was always fraught with the risk that IBM could use its might to crush its younger competitors.

However, during the mid-1970s these manufacturers of so called "plug-compatible" machines (because they can plug into an IBM installation) were allowed to thrive. Amdahl accelerated from a standing start in 1971 to a turnover of more than $300m in 1978, on the basis of very large machines using more modern components than those of IBM. Between 1974 and 1978, Itel, the leasing company, increased its turnover from around $150m to $700m, with machines produced by Hitachi of Japan and National Semiconductor, of California.

MAJOR U.S. COMPANIES ($m)

Company	1978 Revenue from data processing
IBM	17,072
Burroughs	2,107
NCR	1,932
Control Data	1,867
Sperry Rand	1,807
Digital Equipment	1,437
Honeywell	1,294
Hewlett Packard	657
Memorex	570
Itel	487
TRW	466
Data General	380
Amdahl	321
Storage Technology	300
Automatic Data Processing	290

Source: Datamation

IBM seemed content to allow the plug compatible business to become established, or at any rate it did not take rapid retaliatory action. This may in part have been because IBM has been deeply enmeshed in an anti-trust suit brought by the U.S. Government. It may therefore have wished to keep the claws of its monopoly power carefully retracted.

New range

However its benign, even somnolent posture changed rapidly with a series of moves in late 1978 and early 1979. The most important was the announcement in January of the first two models of its new 4300 range of computers.

By the standards of any other industry, these announcements were astonishing. The new machines offered about four times the performance of those they superseded—at a reduced price. Even in the computer industry, where the price of a unit of computing power has steadily been lowered by improvements in technology, IBM's new machines came as a shock.

In one move, they cast a shadow of obsolescence, not only over a range of IBM's own machines but over those of the plug compatible rivals as well. The response was predictable. The plug compatible manufacturers suffered a disastrous fall in orders as customers decided instead to go for the new high performance 4300 range. Customers who would have bought new machines have also been hedging their bets by opting for short leases so that they will not be caught with obsolete equipment. IBM has received orders for the 4300 series estimated to be about $10bn, and some of its customers will have to wait three years for delivery.

Amdahl, which has been hit by the shift from sale to leasing, has suffered an 89 per cent drop in its second quarter earnings to $1.2m and is planning a merger with Memorex, another plug compatible manufacturer.

Itel, which is perhaps the hardest hit, has reported a $60m loss in the second quarter of the year. It has had to halve its expectation of deliveries from 400 to 200 computer systems by the end of the year and it has laid off 500 employees.

The fears of loss generated by IBM have, moreover reached London, where Lloyd's underwriters are expecting to face claims of some $225m on insurance policies which computer leasing companies took out against the possibility of cancellations by their customers.

And unfortunately the announcement of the 4300 series was no freak storm, it almost certainly marks the onset of a new competitive climate in which IBM will attempt to accelerate the cycle by which new technology stimulates commercial growth by creating new demand.

The launching of the 4300 medium sized office machines had already been preceded by the announcement of a new very high powered business computer, the System 38.

The immense interest in the new systems is partly because they represent a new approach to design which should make them easier to use and allow a more flexible communications approach to data processing. Large numbers of computers and terminals can be linked together in a co-operative network so that computer experts can sort out problems in an office many miles away.

Faster machines

The 4300, particularly, also uses very advanced semiconductor components and new methods of assembly which pack the electronics far more densely than has hitherto been possible.

The microelectronic components used in the 4300 are 32 times denser than those used in the present 370/138 IBM computer. That means the machines can be smaller and cheaper, and because electrons do not have so far to travel, faster. More important, they will be easier to service.

Clearly, IBM's competitors will be running flat out to catch up. They will hope that, as before, IBM will be inhibited by its vast bulk from making too many spectacular leaps in price and performance. For obviously, IBM has to be very cautious about advances which could make billions of dollars worth of its own equipment obsolete. For at least the next year, however, IBM can be expected to continue the launch of new and better products. And the signs are that it will continue the policy of aggressive pricing.

IBM can also be expected to continue its attack on the small computer market with its Series 1 minicomputer range and also with more and more sophisticated office terminals which themselves incorporate miniature computers.

MAJOR COMPUTER/ COMPANIES OUTSIDE THE U.S. ($m)

Company	1978 Revenue from data processing
Fujitsu (Japan)	1.514
International Computers Limited (UK)	0.956
Siemens (Germany)	0.600
Cii-Honeywell-Bull (France)	1.028

Source: FT Estimates

The worrying point for competitors is that in addition to its legendary marketing ability, IBM has demonstrated in its latest machines, a supremacy over the technology which caught many competitors off balance.

The basic trend of this technology is that electronic components will continue for at least the next decade to become smaller, more complex and relatively cheaper, while programming (software) becomes more difficult and more expensive. It follows that the actual machines will become less and less important compared with the cost of the programs which are run on them. This is a point which the plug compatible manufacturers exploited until the recent announcements. They realised that computer programs already written for IBM machines represented such a huge investment that IBM could not possibly afford to produce new machines which would not accept the old programs.

For a similar reason the independent manufacturers like International Computers Limited (ICL) in the UK or Burroughs or NCR in the U.S. felt reasonably secure from IBM, even though they are much smaller. A customer of ICL or one of the other independents may be very reluctant to transfer allegiance to IBM because of the high cost and great inconvenience of having all its programs rewritten.

However, in the 1980s the independents as well as the plug-compatible manufacturers will be less secure from IBM's competition than hitherto, because of the spectacular fall in the cost of hardware. By 1990 the cost of computer processing equipment is likely to be trivial compared with other elements of total information system. By then it may be very easy to provide small machines which will translate the programs written for one type of computer into the language of a rival system. Moreover, the cheapness of computing power is enabling manufacturers to use a system called "microcode" which can transform the characteristics of a computer without any change of wiring.

Changing rules

Microcode is a set of programs written by a manufacturer which can re-arrange the way in which a computer carries out its internal administrative functions. By its use, an IBM computer could be made to operate as if it were an ICL computer or vice versa. Microcode is therefore changing the rules of competition in ways which are by no means easy to predict.

Some people say the world is moving inexorably towards standardisation on IBM systems. This is because plug-compatible manufacturers take some business from IBM, but they also reduce business available to the independent companies and so re-inforce the general "IBM system."

GENERAL PURPOSE COMPUTER MARKET SHARES

	1973 %	1978 %	1983 %
IBM	65.8	64.2	60.0
PCM†	—	1.3	8.2
Total IBM Compatible	65.8	65.5	68.2
Honeywell	12.6	11.0	9.3
Burroughs	6.6	7.6	6.8
Sperry Univac	71.	7.1	6.0
NCR	3.8	3.9	3.4
Control Data	3.0	2.4	1.7
Others	1.1	2.5	4.5
Total Non-IBM Compatible	34.2	34.5	31.8

* Estimated worldwide market shares for medium to large scale general purposes mainframes.
† IBM Plug-Compatible mainframe manufacturers.
Source. Paine Webber Mitchell Hutchins

Moreover several powerful independent computer companies have chosen to build machines which if not exactly plug-compatible broadly follow the IBM trail. The two most important are Siemens of Germany and Fujitsu of Japan.

On the other hand, it is possible that the use of microcode and of relatively cheap emulators (computers which translate from one system to another) will steadily erode the difference between IBM and the rest.

The effects are difficult to foresee. It is argued that a company like ICL could use microcode to enable its customers to run programs written for IBM machines, while IBM (being so much larger) would not bother to write microcode to imitate ICL systems. Another uncertainty is the extent to which IBM will continue its present policy of using microcode to make life difficult for all of its plug-compatible competitors. It can do this by in effect putting secret instructions into its machines which only other IBM equipment can understand.

These uncertainties are given a further twist by the effects of what the industry calls "unbundling"—the practice of selling programs separately from machines instead of all in one package.

The 4300 series is sold "unbundled," which means the machine itself can be so cheap that it will be extremely difficult for plug-compatible manufacturers to be competitive. However the sets of programs for the machines may be relatively expensive. This could force plug-compatible manufacturers into a huge and risky investment with software.

If this should happen a company like ICL which already provides both machine and programs would therefore have more room to manoeuvre and could bless their past judgment for staying out of the IBM camp.

Lower prices

On the other hand, the plug-compatible manufacturers will undoubtedly fight back with new products and lower prices. The consultants Arthur D. Little and others argue that this could bring in a new era of price-cutting which could ultimately have the effect of making the IBM-type systems much the cheapest in the world. With cheapness, it is argued, would come a gradual extension of market share for IBM and the surviving camp followers at the expense of the independents.

The independents would then seek specialised parts of the market like banking, insurance and retailing which they could dominate for a while.

But above all, the independents will have to watch the predatory movement of IBM itself. For as the price of computers falls, IBM must look restlessly for new business in every corner of the market in every part of the globe.

Letters to the Editor

Utopian view of gold

From the Chairman, Rea Brothers

Sir,—I agree with Sam Brittan's Economic Viewpoint article (September 20) when he writes that if the central banks had had the courage of their convictions in 1970 they would have dumped their own gold stocks on a falling market.

According to the figures published by the IMF as at September 30, 1978, gold in the hands of the central banks together with that of the IMF itself but excluding China, Soviet Russia, etc., total 39,325 tons, which at today's bullion price of $375 per ounce amounts to approximately $474bn.

Sir Thomas More once wrote: "They wonder much to hear that gold, which in itself is so useless a thing, should be everywhere so much esteemed." UTOPIA.

If the central banks could dispose of their gold at the ruling market price, which, of course, they cannot, and use the proceeds to redeem government indebtedness (by repurchasing government bonds), it would put an end to the ridiculous speculation in gold that is currently taking place and, at the same time, have a considerable anti-inflationary effect. The central banks should be more realistic and should not try to live in their own Utopia.

Walter H. Salomon.
36-37, King Street, EC2.

The third airport

From Mr. J. S. Haw

Sir,—Mr. B. Williams in his letter (Sept. 12) not only makes the fundamental error which Mr. S. Davidson refers to in his letter of September 17 but a large number more.

It is doubtful whether Stansted would "quickly and cheaply be developed to fit the bill." The proposed two runway airport would necessitate the demolition of the existing terminal buildings and there is some doubt, on grounds of alignment, as to whether the existing runway would be used. Also evidence has been produced which indicates that the M11 would not have the capacity to carry the traffic to and from the third London airport.

Mr. Williams implies that, while the 1964 Enquiry was with regard to a major project, the present proposal is a minor one. While now only two runways are under contemplation, four terminals are anticipated and "all the other urban development" will still, needless to say, be required.

It is a total falsehood to say that Stansted would have been one of Roskill's short-listed sites had it not been for the previous Enquiry. Roskill's terms of reference did not exclude Stansted and indeed it survived up to the Commission's "reduced medium list" of possible sites. Roskill clearly reports that Stansted was not for several reasons on the Commission's short-list and it is interesting to note that in fact Stansted came out fairly low in the reduced medium list.

It is hard to follow how Mr. Williams can suggest that the airport in contemplation would be "number three to Heathrow and Gatwick" when it would have a passenger capacity of 50 million (nearly twice that of the existing Heathrow): Such a new airport would surely be *the* London Airport.

To suggest that the majority of the land east of the present runway is occupied solely by caravan parks (there is in fact one) and light industrial sites is quite untrue and I suggest that the next time Mr. Williams is fortunate enough to be in this area he looks for himself, bearing in mind that the present airport occupies approximately 850 acres and the proposed airport site alone would occupy 5,000 acres. This, of course, disregards the additional much greater area which would be needed for housing, roads, hotels, light industries and other things which would, as a matter of course, spring up around a new airport of this size.

Mr. Williams says "hundreds rather than thousands" would be affected by the noise footprint. The number of people within the 35NNI footprint (nearly intolerable at night and very bad during the day in open country) has been estimated by the experts at 6,000 (which rises to 35,000 with supersonic aircraft such as Concorde).

Mr. Williams refers to a new developed Stansted offering employment to many thousands of people and this is certainly true. The airport would provide 50,000 jobs (the majority of these would be skilled jobs). What sense would it make, however, for an airport of this size to be at Stansted when the figures for July (supplied by the Manpower Services Commission) for the area covering Epping, Harlow and Bishop's Stortford show 2,700 people out of work (including school leavers and young people) as opposed to unfilled vacancies of 1,000 jobs? Surely in an era of acute concern about unemployment it would make more sense to put the third London airport where there is a higher level of unemployment to be dealt with.

J. S. Haw.
Gardeners' Croft, Bamber's Green, Takeley, Essex.

Pension funding

From Mr. T. S. Shucksmith.

Sir,—There is little dissension between the Government Actuary's Department and myself, of which I am aware, and one does not therefore need to decide with whom the truth lies as Mr. Nottage suggests (September 18).

We agree that advance funding would be more costly than pay-as-you-go if a positive real rate of return is not earned on average in the long term. The Government Actuary's Department did not, however, say that it thought a positive real rate of return would not be earned or that this was or is the accepted view. Of course, nobody knows what will happen in the future as regards rates of return so there is no truth on which one can decide. For what it is worth, by own view is that a gross investor such as a pension fund is more likely to earn a postive real rate of return on average in the long term than not.

However, the main argument for microeconomic agents, whether ICI or myself, funding pension arrangements is that we may not have the earnings out of which to do the paying when the going in the form of benefit payments is required. Whether British Rail and the National Coal Board are microeconomic agents, as I am using the term, or are assured of their cash flow requirements in perpetuity is another matter, but Government policy appears to be not to treat them as immortal.

A collective arrangement, in which all microeconomic agents participated, in the form of a nationwide pay-as-you-go pension scheme providing comprehensive benefits is a theoretical alternative to individual advance funding, but would be an enormous incursion into individual choice. All microeconomic agents would be unlikely to agree voluntarily and Government concern would be resented by many if not most.

The truth which Mr. Nottage fails to appreciate is that personal rates of time preference vary and many individuals and groups will choose to save and maximise their utility by so doing, even if they expect to earn only a real negative rate of return on their savings (in terms of future goods for current goods).

Tom S. Shucksmith.
Roquebune, 139, Blackborough Road, Reigate, Surrey.

Pay after you've gone

From Mr. A. Spedding.

Sir,—With reference to Mr. Nottage's letter, I am sure that no-one would disagree with the Government Actuary's Department submission that if negative real rates of return are expected to obtain in the long term, then present funding arrangements would have to be modified. This is quite different from Mr. Nottage's frequently expressed views that the funding of pensions should be replaced by pay-as-you-go arrangements. Indeed, in the conditions described by the Government Actuary's Department, it would be better to pay-after-you've-gone!

It is of interest to contemplate the economic situation which can tolerate a continuing negative real return on investments, a situation where the demand from would-be borrowers far exceeds the supply of funds for investment, with all that that implies.

The fact that some pension funds have achieved negative real rates of return over a period of years does not imply that this situation will continue in the long run. One might with equal (in)validity forecast a long term positive real return from the fact that over the last fifty years, a regular investment in one of the Equity Indices has, for ten-year periods, produced a positive real return in almost 80 per cent of cases, even if one third of investment income has been paid to the Revenue.

The point is that no-one really knows what the future long term real return will be. However, is it not preferable, for example, to make a contribution now of say 20 per cent of salaries in the expectation of meeting a pension liability in ten years' time of 25 per cent of the then salary, rather than rely on the employer (government or private) being able to make a contribution of 25 per cent of salaries in ten years' time. If in fact only a negative real return of say 2 per cent is achieved, a final topping up of about 8½ per cent of salaries would be required. The beneficiary may be more reassured if some provision were made *now*, even if it proves to be inadequate—after all, there may not be any salaries to which to apply the contribution rate, and even nationalised industries have been known to decline!

A. Spedding,
Dolphin House, New Street, Salisbury

Indexed inflation

From Mr. David Layton.

Sir,—I was interested in Samuel Brittan's article (August 13), Cost of Living Safeguards. It is one of the subjects on which we have now done quite a lot of work here to which Mr. Brittan referred.

I just want to raise a point of emphasis. In my view the strongest argument for doing anything about indexing is not that it will reduce the level of pay increases, but for the very important reason that one of the worst effects of inflation is the instability that it gives to peoples' real incomes. What a gently moving indexed arrangement can do is to remove some of that instability.

The normal system for operating the equivalent of a cost of living arrangement is as we all know, a battle royal between the unions and employers every year to get a swalloping increase to catch up with the change in the value of money.

As I see it the important thing to do is to get trade unions to recognise the value to their members of the introduction of some degree of partial indexing, particularly for those on lowest pay. This should be done widely. It should not of course be done on a month by month supplement basis, that simply means that people piddle around with different rates of pay all the time, and that, in itself is destabilising.

I do not believe there is any point at all in changing from the present RPI, and I think the way to avoid the tax element is simply by arranging to have increases which are less than the change in the cost of living as measured by the RPI.

If one wants to choose suitable ways of indexing or semi-indexing, it is very simple to play around a bit with the interval between pay changes.

In my view, if we could get a major development in indexation solely for the purpose of stabilising peoples' real income by having supplementary increases between the annual pay round, then we shall have achieved one of the most important steps forward in reducing the unnecessary pay pressures created by the way we run the system at present.

I believe it is a mistake to place any emphasis on the value of indexing for the purpose of reducing inflation. I think that that might be an incidental result, but I do not believe that one can handle industrial relations and pay questions at any time, or length of time, by postulating some national interest in the way we do it. Only the economists will understand.

D. Layton,
Income Data Services, 140, Great Portland Street, W.1.

Today's Events

GENERAL

UK: Engineering workers start two-day national strike.

National Union of Mineworkers present pay claim for 65 per cent increase to National Coal Board.

Liberal Party Assembly opens, Margate (until September 29).

International Coffee Organisation council meets in London.

Eight NATO nations take part in maritime exercise Ocean Safari 79 (until October 5).

Prices for rough diamonds rise by average 13 per cent (industrial diamond prices unaffected).

Sixth European congress of building societies opens in London (until September 28).

Mr. Peter Walker, Agriculture Secretary, and Mr. Clive Jenkins ASTMS general secretary, speak at Council for Education in World Citizenship conference, London.

Music Publishers Association forum opens, London (until September 26).

Fifth Commonwealth Magistrates' conference, Oxford (until September 29).

International Welding and Metal Fabrication Exhibition opens, National Exhibition Centre, Birmingham (until September 28).

Overseas: President José Lopez Portillo starts five-day official visit to U.S.

Commonwealth Finance Ministers start five-day meeting, Malta.

NATO policy advisory group meets, Athens (until September 28).

Mr. Hilla Liman becomes President of Ghana, on change from military to civilian rule.

Mr. Bob Astles (Amin's adviser) on trial in Kampala.

OFFICIAL STATISTICS

Department of the Environment publishes bricks and cement production figures for August.

COMPANY RESULTS

Final dividends: Chambers and Fargus. English Association of American Bond and Share Holders. Parker Knoll. Interim dividends: Arncliffe Holdings. Cakebread Robey. Energy Services and Electronics. European Ferries. Fisons. Metalrax (Holdings). Spear and Jackson International. Tarmac.

COMPANY MEETINGS

See Financial Diary on page 16.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
Current	Weightech '79 (01-686 5741) (until Sept. 26)	Metropole Ex. Centre Brighton
Current	International Welding and Metal Fabrication Exhn. (021-705 6707) (until Sept. 28)	National Exhibition Centre, Birmingham
Sept. 25—28	International Conference and Exhibition on Information Processing—Euro IFIP (01-405 6233)	Wembley Conference Centre
Sept. 25—28	Business Efficiency and Equipment Exhibition (0272 312850)	Exhibition Centre, Bristol
Sept. 26—30	High Fidelity Autumn Exhibition (Radnage 2674)	Cunard Int. Hotel, London
Sept. 27—28	Interior Designers and Decorators Association Exhibition—DECOREX (01-242 6171)	Grosvenor House, London
Sept. 30—Oct. 3 .	Frozen Foods and Freezer Festival (01-353 4885)	West Centre Hotel, London
Sept. 30—Oct. 3 .	British International Footwear Fair (01-739 2071)	Olympia
Sept. 30—Oct. 3 .	International Sports and Leisure Exhibition—ISLE (01-734 9694)	National Exhibition Centre, Birmingham
Oct. 2—Oct. 4	Southern Floorcoverings Exhibition (0243 88423)	Metropole Ex Centre Brighton
Oct. 3—4	Electrical Research Association Battery Exhibition (Leatherhead 264045)	Royal Garden Hotel, W
Oct. 3—4	London Bakers Exhibition (01-947 7781)	New Horticultural Hall
Oct. 6—9	Salon International (Hairdressing and Beauty) (01-251 8000)	Wembley Conf. Centre
Oct. 7—10	International Garden and Leisure Exhibition—GLEE (01-546 6757)	National Exhibition Centre, Birmingham
Oct. 8—11	Distribution for Industry Exhibition (01-353 4885)	National Exhibition Centre,
Oct. 9—11	Electronic Measuring Instruments Exhibition—EMIX (021-705 6707)	Bloomsbury Centre Hotel
Oct. 9—11	Medical Laboratory Exhibition (01-776 0011)	West Centre Hotel
Oct. 9—11	National Housing and Town Planning Exhibition (01-586 5741)	Harrogate
Oct. 15—18	Video Tradex International Exhb. (01-686 7181)	Wembley Conf. Centre
Oct. 15—20	International Food Wine and Kitchen Exhibition (06284 2442)	Bristol

OVERSEAS TRADE FAIRS AND EXHIBITIONS

Sept. 25—27	National Business Aircraft Association Convention and Exhibition	Atlanta
Sept. 26—30	Research and Development Exhibition—INNOTEX '79 (01-235 0211)	Stuttgart
Sept. 27—30	International Suppliers Fair for the Motor Industry—AUTOTEKNIK	Paris
Sept. 28—Oct. 5 .	International Exhibition of Motor Maintenance and Car Accessories (01-439 3964)	Copenhagen
Sept. 28—Oct. 7 .	International Motor Cycle and Cycle Show	Paris
Sept. 29—Oct. 8 .	International Autumn Trade Fair	Metz
Sept. 30—Oct. 3 .	Irish Fashion Industry Fair (Dublin 780855)	Dublin
Sept. 30—Oct. 5 .	International Fair for Machine Tools and Tools (01-540 1101)	Copenhagen
Oct. 1—5	Chemical Plant Engineering Exhibition (01-486 1951)	Tokyo
Oct. 2—11	International Textile Machinery Exhibition (01-651 2121)	Hanover
Oct. 3—5	Hong Kong Toy and Gift Fair (01-930 7955)	Hong Kong
Oct. 5—10	Electronics Show (01-734 9628)	Osaka
Oct. 8—13	International Maritime Exhibition—RIOMAR	Rio de Janeiro
Oct. 10—13	Office Equipment Exhibition (01-540 1101)	Berlin
Oct. 10—17	International Plastics and Rubber Trade Fair (01-409 0956)	Dusseldorf
Oct. 13—17	International Exhibition of Women's Ready-Made Clothing (01-439 3964)	Paris
Oct. 14—22	International Hotel and Catering Industries Equipment Exhibition (01-439 3964)	Paris
Oct. 15—Nov. 15 .	Chinese Export Commodities Fair	Canton
Oct. 15—18	International Airport Construction and Equipment Exhibition (0727 60213)	Nice

BUSINESS AND MANAGEMENT CONFERENCES

Sept. 25	Planned Savings: Personal Finance for the Expatriate (01-251 3546)	Inn on the Park, W1
Sept. 26—29	Institute of Purchasing and Supply: National Conference—Enterprise, the Corporate Role of Purchasing and Supply Management (Ascot 23711)	Sheffield
Sept. 27	HS Conference Studies: Captive Pension Funds (01-935 2352)	Royal Lancaster Hotel, W2
Sept. 27—28	AMR International: The 1979 International Conference on Industrial Leasing (01-262 2732)	London Press Centre
Sept. 28	CCC. The Interbank and London Short Term Money Markets (01-222 8852)	Inn on the Park, W1
Sept. 28	European Study Conferences: European and American competition law (057282 2711)	Goldsmiths Hall
Sept. 30—Dec. 14	BTSL: General Management Course (04862 5444)	Woking, Surrey
Oct. 1	BIM: Energy Saving with Microprocessors (01-405 3456)	Europa Hotel, W1
Oct. 1—4	RoSPA National Road Safety Congress (021-233 2461)	Imperial Hotel, Blackpool
Oct. 1	BIM: The office of the future (01-405 3456)	Europa Hotel, W1
Oct. 3	London Chamber of Commerce: Business with Czechoslovakia (01-248 4444)	69 Cannon Street, EC4
Oct. 3	Henley Centre for Forecasting: Cost and prices—forecasts to 1984 (01-236 3011)	Selfridge Hotel, W1

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY, SEPTEMBER 24

COMPANY MEETINGS—

BOARD MEETINGS—

DIVIDEND & INTEREST PAYMENTS—

TOMORROW, SEPTEMBER 25

WEDNESDAY, SEPTEMBER 26

THURSDAY, SEPTEMBER 27

FRIDAY, SEPTEMBER 28

SATURDAY, SEPTEMBER 29

SUNDAY, SEPTEMBER 30

Analysis of bank advances and acceptances

to UK residents by banks in the UK at August 15, 1979; as Table 5 in the Bank of England Quarterly Bulletin.

£m			ADVANCES & ACCEPTANCES TO UK RESIDENTS: Total	of which in sterling	of which in foreign currencies	FINANCIAL: Total financial	of which in sterling	Hire-purchase finance houses	Property companies	Other financial
London clearing banks	1979	May 16	20,694	19,086	1,608	2,101	1,633	164	770	1,167
		Aug. 15	22,338	20,922	1,416	2,062	1,648	158	778	1,126
Scottish clearing banks	*1979*	*May 16*	2,728	2,428	301	282	168	40	81	161
		Aug. 15	2,886	2,615	271	278	175	54	79	145
Northern Ireland banks	1979	May 16	689	687	2	33	32	3	23	7
		Aug. 15	756	754	2	32	31	3	24	5
All banks	1979	May 16	49,502	38,163	11,338	8,786	5,576	1,409	2,145	5,231
		Aug. 15	52,099	41,633	10,467	9,074	6,014	1,632	2,115	5,326
of which in sterling	1979	May 16	38,163			5,576		1,384	1,831	2,361
		Aug. 15	41,633			6,014		1,599	1,863	2,552
Changes: in sterling	1979	Feb./May	+1,939			+207		+141	−24	+ 91
		May/Aug.	+3,469			+438		+215	+32	+191
in foreign currencies adjusted for exchange rate effects§	1979	Feb./May	+ 373			+335		+ 3	−55	+386
		May/Aug.	− 23			+ 89		+ 10	−40	+119

			MANUFACTURING: Total manufacturing	of which in sterling	Food, drink and tobacco	Chemicals and allied industries	Metal manufacture	Electrical engineering	Other engineering and metal goods	Shipbuilding †	Vehicles	Textiles, leather and clothing	Other manufacturing
London clearing banks	1979	May 16	5,520	5,215	758	538	356	444	1,240	400	195	560	1,028
		Aug. 15	6,129	5,823	779	636	399	442	1,443	404	189	678	1,159
Scottish clearing banks	1979	May 16	644	618	125	41	29	30	112	146	14	61	86
		Aug. 15	659	641	126	34	36	32	121	142	14	65	89
Northern Ireland banks‡	1979	May 16	113	113	29	—	—	—	36	—	—	24	25
		Aug. 15	129	129	30	—	—	—	40	—	—	30	28
All banks	1979	May 16	13,298	10,971	2,121	2,469	788	1,058	2,306	614	662	1,028	2,252
		Aug. 15	14,307	11,908	2,232	2,658	850	1,088	2,598	619	658	1,171	2,433
of which in sterling	1979	May 16	10,971		1,753	1,660	689	885	2,056	571	630	847	1,829
		Aug. 15	11,908		1,851	1,790	767	906	2,292	586	631	1,049	2,035
Changes: in sterling	1979	Feb./May	+519		+37	+ 90	+21	+38	+ 50	+ 3	+40	+102	+139
		May/Aug.	+937		+97	+130	+78	+22	+236	+14	+ 2	+152	+206
in foreign currencies adjusted for exchange rate effects§	1979	Feb./May	+114		− 1	+ 34	+10	+31	− 10	−11	+ 4	+ 12	+ 45
		May/Aug.	+249		+41	+122	−10	+23	+ 76	− 7	− 3	+ 2	+ 5
Advances only All banks	1979	May 16	11,965	9,652	1,917	2,212	638	936	2,144	608	483	938	2,089
		Aug. 15	12,584	10,290	1,900	2,259	680	959	2,394	617	458	1,071	2,245

			OTHER PRODUCTION: Total other production	of which in sterling	Agriculture, forestry and fishing	Mining and quarrying	Construction	PERSONS: Total persons	of which in sterling	For house purchase	Other
London clearing banks	1979	May 16	2,859	2,799	1,538	189	1,132	4,320	4,315	1,318	3,002
		Aug. 15	3,131	3,092	1,739	178	1,214	4,787	4,783	1,500	3,287
Scottish clearing banks	1979	May 16	577	516	406	73	98	438	437	120	318
		Aug. 15	638	582	464	69	105	487	487	143	344
Northern Ireland banks	*1979*	*May 16*	*185*	*185*	133	4	48	*153*	*153*	37	*116*
		Aug. 15	204	204	146	4	54	173	173	44	129
All banks	1979	May 16	5,511	4,605	2,181	1,499	1,830	6,366	6,351	1,831	4,535
		Aug. 15	5,868	5,068	2,456	1,480	1,932	7,021	7,008	2,074	4,947
of which in sterling	1979	May 16	4,605		2,166	709	1,730	6,351		1,827	4,524
		Aug. 15	5,068		2,443	772	1,853	7,008		2,071	4,937
Changes: in sterling	1979	Feb./May	+294		+184	+59	+ 25	+333		+ 68	+265
		May/Aug.	+463		+277	+63	+123	+657		+244	+412
in foreign currencies adjusted for exchange rate effects§	1979	Feb./May	+ 37		+ 6	+34	− 2	+ 4		+ 3	+ 2
		May/Aug.	− 39		− 1	−25	− 14	− 1		—	—

			SERVICES: Total services	of which in sterling	Transport and communications	Public utilities and national government	Local government	Retail distribution	Other distribution	Professional, scientific and miscellaneous
London clearing banks	1979	May 16	5,894	5,123	483	567	81	1,283	1,128	2,353
		Aug. 15	6,228	5,576	507	611	67	1,269	1,152	2,392
Scottish clearing banks	1979	May 16	788	687	109	83	42	127	113	315
		Aug. 15	823	730	126	81	58	130	128	301
Northern Ireland banks‡	1979	May 16	205	205	—	22	8	78	30	66
		Aug. 15	217	217	—	19	6	84	34	74
All banks	1979	May 16	15,541	10,661	1,771	2,440	998	2,013	3,772	4,546
		Aug. 15	15,831	11,636	1,815	2,387	917	2,088	3,687	4,936
of which in sterling	1979	May 16	10,661		1,063	149	788	1,974	2,494	4,193
		Aug. 15	11,636		1,156	255	871	2,042	2,642	4,671
Changes: in sterling	1979	Feb./May	+585		+ 73	− 32	+142	+187	+ 30	+195
		May/Aug.	+975		+ 94	+106	+ 83	+ 68	+147	+477
in foreign currencies adjusted for exchange rate effects§	1979	Feb./May	−117		+ 46	−209	− 21	− 4	+ 42	+ 30
		May/Aug.	−322		+ 4	+ 16	−152	+ 10	−139	− 63

† Including lending under special schemes for domestic shipbuilding. ‡ The analysis provided by Northern Ireland banks differs slightly from other banks. Chemicals and allied industries are included indistinguishably in "Other manufacturing"; Metal manufacture, Electrical engineering, Shipbuilding and Vehicles in "Other engineering and metal goods"; and Transport and Communications in "Public utilities and national government." § The figures exclude as far as possible the effect of changes in exchange rates on the sterling value of advances in foreign currencies.

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BET expects no more than modest increase

NO MORE than a modest increase in profit is expected for 1979/80 at British Electric Traction Co., says Sir John Spencer Wills, the chairman. Current performance is mixed with some group companies doing better and others not going so well.

He reports that the retirement of Lord De La Warr in October will mean that three of the five executive directors will have retired within the space of 12 months but this has not produced succession problems.

For the year to March 31, 1979, good results by smaller subsidiaries was obscured by Rediffusion's contribution which was marginally lower at £17.11m pre-tax. Total BET profit was ahead from £67.04m to £72.14m on turnover of £720m (£632m).

Plant hire and printing and publishing activities did well and the three loss makers of two years earlier, Murphy Bros., Humphries Holdings and Re-Chem International considerably improved their profits.

The winter's industrial disputes and very bad weather, which cost the group an estimated £1m overall, depressed Boulton and Paul and similar factors hit Canadian Motorway's. Here there was a slide from £1.29m to £344,000.

Some of the problems of the winter spilled over into the current year at Boulton and Paul but these have now been largely overcome. At Rediffusion, aside from the present difficulties the long term outlook is good, Sir John comments.

Strong sterling knocked some £1.7m in translation off profit at United Transport Company where the reported total for 1978 was £20.46m (£19.88m). The chairman says the aftermath of the haulage dispute and fuel shortages will make it difficult for the subsidiary to match this profit next time.

Further expansion of United Transport's industrial brush division is taking place with new production facilities to increase output of strip and roller brushes for which demand is widespread.

European freight operations were disappointing amid severe competition. However, rationalisation of activities in Belgium and Holland should benefit future profits.

The current year has started well for Advance Laundries which should show improvement for the current 12 months although recent wage settlements and higher material costs are making it increasingly difficult to maintain profit margins.

At March 31, 1979, group investments were valued at £63m (£62m) and cash and short-term deposits stood at £28.52m (£25.02m). Bank overdrafts were £10.38m higher at £71.06m and loan capital was up at £49.47m (£35.28m).

As reported with results the net dividend is stepped up to 7.572p (5.78p).

Meeting Connaught Rooms, WC, on October 18 at 12.15 p.m.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims—Amcliffe, Cakebread, Robey, Energy Services and Electronics, European Ferries, Fisons, Metalrax, Spear and Jackson International, Tarmac.

Finals—Chambers and Fargus, English Association of American Bond and Share Holders, Parker Knoll.

FUTURE DATES

Interims—	
British Home Stores	Oct. 17
Dickinson Robinson	Sep. 24
Supra Group	Sep. 26
Wadham Stringer	Sep. 27
Finals—	
A.B. Electronics	Sep. 25
Canadian Overseas Packaging	Oct. 9

Neepsend sees higher profit

CONFIDENT that various measures undertaken will bear fruit in the second half, Mr. Stanley Speight, chairman of Neepsend, is forecasting a further improvement in current year results.

In view of extensive development and rationalisation being carried out the chairman says that it was considered prudent to maintain the dividend for 1978-1979. However, when these developments are completed and producing results it is hoped to pay an increased amount.

On a 13 per cent increase in turnover the group pushed up trading profits by 42 per cent to £1.99m in the year ended March 31, 1979. Redundancy payments up from £5,111 to £80,016 were charged in the year

The chairman says that the result has been achieved in very difficult trading conditions with little change in the continued recession in both the steel and iron industries and with little improvement in the situation as far as dumped steel imports are concerned.

He explains that the higher margins have been attained by more economical production resulting from earlier capital expenditure. This particularly applied to the tool and saw and agricultural divisions, in the magnet section of the castings division and the completion of developments at Ferro Alloys and Metals.

Referring to developments the chairman says that the capacity of the rolling mill complex purchased early this year will more than cover the output of the older seven bar mills with a much smaller workforce. Complete transfer of all production and closure of the old mills will be completed this month.

In the steel division further improvements to plants are being carried out and Mr. Speight is confident that the result will be that the group will be able to compete with any manufacturer of special steels either at home or abroad.

Further rationalisation is taking place in teh tools division and in castings better methods and plant are being looked at in order to increase marget business and enter new and more profitable markets in iron castings. The major development in the saw division will be in new plant to increase bandsaw production.

In all the chairman anticipates that capital expenditure in the current year will amount to almost £1m. At the year-end bank overdrafts amounted to £2.31m (£3.05m), while medium-term loans increased from £3.53m to £6.45m.

With the rationalisation taking place some of the group's properties will be sold and the proceeds will be used to reduce bank borrowings.

The auditors point out that the group has not complied with SSAP 12, depreciation not having been provided on freehold and leasehold buildings; the effect of this has been to increase the group net profit by some £190,000.

The directors say that they do not feel any useful purpose would be served by following this recommendation as they feel that group properties will continue to appreciate in value.

Meeting, Sheffield, October 18 at 12.15 pm.

Cheaper vegetables offset dairy rises

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

THE Financial Times Grocery Prices Index was virtually unchanged during September as lower fruit and vegetable prices were balanced by higher prices for dairy produce.

The September index stood at 114.17, against 114.16 for August.

Apart from the variations in dairy produce and fruit and vegetables, there was little other change in the shopping basket except for the sugar, tea, coffee and soft drinks section which increased slightly in cost.

The overall stability is a welcome indicator for the Government which is faced with rising retail price inflation. Surveys such as the FT's grocery price index have become an important early indicator of food price inflation, especially since most Government food price surveys have been abandoned in the economy drive throughout Whitehall.

The FT shopping basket is based on data collected by 25 shoppers who monitor a list of 100 grocery items each month in the same food stores of all types and sizes throughout the UK.

The dairy section of the basket rose by over £9 to £566.56 in September. The rise was mainly due to an increase in butter prices — by about 3p per half-pound — and a 3p per half-dozen increase in the price of eggs.

The fall in the fresh fruit and vegetable section—from £220.98 to £204.19 — was largely due to the good weather during early September which increased supplies. Tomatoes, especially, were much cheaper in most shops.

The British Farm Produce Council, in its latest bulletin, suggests that tomatoes should be one of the bargain buys for shoppers at the moment. The Council says that as long as tomatoes are basically sound, then good use can be made of them, but warns that supplies will probably soon ease off, as an early frost will bring the present plentiful outdoor supplies to an end.

The meat section of the basket also dropped slightly in price, from £489.54 to £487.15. The FT shoppers found that lamb was the best buy, with leg of lamb costing about £1.06 per pound. The British Farm Produce Council expects lamb prices to drop further and says it is likely that some butchers are selling some cuts on special offers.

The council says there is little overall change in the meat position, with home-produced beef continuing to be more expensive than lamb or pork.

Although bread prices have been steady this month, the price of many breakfast cereals has risen. This may reflect the widespread shortages of Kellogg's cereals as a result of its recent industrial dispute.

The other major development in the grocery market last week was the re-introduction of special offer coupons by Tesco.

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FINANCIAL TIMES SHOPPING BASKET

SEPTEMBER 1979

	Sept. £	Aug. £
Dairy produce	566.56	557.32
Sugar, tea, coffee, soft drinks	182.76	178.93
Bread, flour and cereals	263.52	261.42
Preserves and dry groceries	96.03	96.50
Sauces and pickles	44.61	43.87
Canned goods	168.42	168.29
Frozen foods	207.43	203.36
Meat, bacon, etc. (fresh)	487.15	489.54
Fruit and vegetables	204.19	220.98
Non-foods	206.08	206.21
Total	2,426.75	2,426.42

Index for September: 114.17

1978: March 100; April 101.77; May 103.11; June 104.18; July 102.41; August 101.89; September 101.90; October 101.77; November 103.67; December 105.10.

1979: January 108.54; February 108.65; March 109.12; April 110.88; May 113.59; June 116.02; July 114.79; August 114.16; September 114.17.

Saml.Heath warns of setback

Profit for the current year at Samuel Heath and Sons, metal products manufacturer, is expected to be very significantly lower, Mr. S. B. Heath, the chairman, tells members in his annual review.

While business ran satisfactorily until the end of 1978, the last quarter of the 1978-79 year proved to be very difficult, he states.

The two major problems were the disruption caused by the drivers' strike, and extremely difficult trading conditions with Nigeria.

The position in Nigeria has improved only marginally, Mr. Heath says. And the strength of sterling is also having its effect both on profit margins and the company's order book, he adds.

Berec offer could cost £5m

Berec Group, Europe's largest manufacturer of dry batteries, has confirmed details of the proposed public tender offer for the outstanding 39.8 per cent stake in its Italian subsidiary, Superpila.

A Berec subsidiary since 1960, Superpila is quoted in Milan, Florence and Rome. The UK parent now intends to offer L6,000 for each of the outstanding 1.47m shares. Consideration on full acceptance would amount ao around £5m which compares with assets attributable to the minority of £3.6m.

Superpila doubled its pre-tax profits to £3.2m in the year ended February 28 last—an improvement which London stockbroker Rowe and Pitman attributed to the absence of industrial disputes together with good volume growth. Profits earned on the minority amounted to £1.2m.

It is felt to be in the long-term interests of both companies that Superpila's operations should become more closely integrated with the rest of the group. In view of the changes this will involve, Berec believes that "the minority shareholders in Superpila should be offered a fair price for their shares."

SHARE STAKES

Associated Dairies Group: Mr. D. Baddiley, director, disposed of 40,000 ordinary shares thereby reducing holding to 90,604 (0.076 per cent).

Five Oaks Investments: Mr. J. R. Waldron, director, acquired 70,000 ordinary shares on September 9.

Carlton Industries: Mr. L. Roydon, director, disposed of 80,000 ordinary shares reducing his interest to 1,657,656 (6.26 per cent).

SPI improves mortgage life policies

Leading Scottish life company, the Scottish Provident Institution, has made several improvements in its life policies, used for repaying house mortgages, designed to make these contracts both cheaper and more flexible.

First, the company has increased the amount of bonus discounted in its low cost endowment contract, following the improvement in its interim reversionary bonus rates earlier this year. The rate now used is £3.88 per cent compound—80 per cent of the interim rate of £4.85 per cent. This lowers the basic sum assured and consequently the premiums paid for a cover level of mortgage.

The company has also made two improvements designed to help the householder when he moves house and takes out a fresh mortgage for a larger amount, and possibly with a later repayment date.

FT Share Service

The following securities have been added to the Share Information service appearing in the Financial Times:

Arrow Chemicals (Section: Chemicals, Plastics).

Mettoy Ltd. (Deferred shares) (Industrials (Miscel.)).

ARMITAGE BROS.

Home and export sales recovered well and continued to expand strongly for Armitage Brothers after the haulage drivers' strike in January. For the 28 weeks to July 14, 1979, pre-tax trading profit of the pet products maker improved from £244,526 to £277,419.

"If overhead expenses can be held profits should again show further growth," says Mr. S. Robert Armitage, the chairman. Last year profit was a record £578,000 (£441,000).

Albany Life's new bonds

A new series of guaranteed income bonds, designed to supplement the present series, has been launched by Albany Life Assurance Company, the UK life subsidiary of the American General Insurance Group.

Under this bond, the Series 9 Guaranteed Income Endowment Bond, a yield of 10 per cent net of basic rate tax is guaranteed over four years, with the income paid half-yearly. This is well below the yield on the company's Guaranteed Income Bond of 12 per cent net over four years.

The current bond is able to provide this high yield level because the method of construction of the plan involves the use of an endowment assurance contract on which there is life assurance tax relief.

But the limitations under which this relief is available mean that the amount that can be invested in this bond is low, even if the investor had no other life assurance contracts. It is essentially designed for the basic rate taxpayer with no other life contracts.

The new bond is a single premium endowment assurance with guaranteed bonuses which, when cashed, provide the income. There is no tax relief available, hence the yield is lower.

But the investor can invest any amount up to £50,000. There is no facility for early cash-in, but on death before the end of the period the initial investment is paid.

The company is aiming at the higher rate taxpayer, even though the income is subject to higher rate tax, both on the income and on the repayment of capital.

INTNTL. COMPANIES and FINANCE

Eurobank expansion checked

By John Evans

The growth of international banking business in the Euro-currency markets came to a temporary halt in the opening quarter of 1979, after a rapid expansion in the second half of 1978, according to the latest data compiled by the Basle-based Bank for International Settlements (BIS).

The gross external assets of banks in the main reporting areas in the industrial nations declined to $883bn in the first quarter from $89.2bn at the year-end.

The banks' liabilities showed a modest increase, from $855bn to $861bn.

The BIS says this pause resulted essentially from two influences. These were the recovery of the dollar in foreign exchange markets and the usual first-quarter unwinding of banking positions built up over the year-end.

"The dollar's recovery brought with it a substantial reversal of the movement into other currencies which, partly through international bank borrowing, had taken place during the preceding two quarters," the bank notes.

Its effects were particularly visible in a $7bn contraction in the foreign assets of banks in the U.S.

Meanwhile, the total amount of net international credit extended by the banks is estimated to have expanded by $10bn to a total outstanding of $545bn in the first quarter.

Disposal by Ralston Purina

By Our Financial Staff

FEEDSTOCK and petfoods company, Ralston Purina, is to wind down its troublesome U.S. restaurant operations with the sale of 232 fast food outlets. The disposal will involve a loss against current year earnings of nine cents a share.

Ralston, which last year earned a total of $155m, or $1.44 a share, announced in June that it was studying the future operational feasibility of its Jack-in-the-Box fast food chain which consists of some 1,000 units. The units to be sold are in the central and eastern U.S.

Earnings growth for Hutchison Whampoa

BY OUR FINANCIAL STAFF

SHARPLY HIGHER six month profits are reported by Hong Kong property, transport and industrial group, Hutchison Whampoa which is lifting its interim dividend by 1 cent to 10 cents a share.

Despite reduced earnings from property development, net attributable profits in the six months ended June rose by 30 per cent to HK$237.1m ($47m). The absence this time round of loss provisions, a lower tax charge and higher extraordinary profits are the main reasons for the improved results.

Hutchison expects earnings for the whole of this year to exceed comfortably those for 1978 when HK$230.9m was achieved before extraordinary items. Extrordinary profits and profits from property development could be very high for 1979, the company stresses.

Actual trading profits during the six months were lower. The company's trading subsidiaries "generally performed well" but high financing costs, inflation and currency fluctuations are beginning to bite into margins. As a result Hutchison views the trading outlook up to the early part of 1980 with "caution."

Profits from property development in the six months totalled HK$26.7m, against HK$66.1m in the opening half of 1978. The tax charge has eased from 24 per cent to 18 per cent while extraordinary profits — which largely arose from the sale of the 55 per cent shareholding in City and Urban Properties — were HK$26.9m higher at HK$118m.

Until 1977, Hutchison was one of Hong Kong's major trading houses. In that year it merged with the Hong Kong and Whampoa Dock Company.

● Newspaper and publishing group, South China Morning Post, reports a 43 per cent gain in after tax attributable profit to HK $44.05m (U.S. $8.81m), writes Philip Bowring from Hong Kong. A final dividend of 80 cents is recommended, against 60 cents last year, making a total of HK $1.10, against 85 cents. The profit improvement came mostly in the second half with earnings at HK $27m against a first half HK $16m.

Australian retailer dips into second half loss

BY JAMES FORTH IN SYDNEY

WALTONS, the retail group, lost A$6m (U.S.$6.7m) in the second half of 1978-79, and the final dividend has been omitted. The reversal is A$1.5m heavier than the deficit foreshadowed in July by the directors, when a group of Melbourne businessmen mounted a raid which gave them 20 per cent of Walton's capital and board representation.

The larger-than-expected loss tipped the group result into the red for the full year to July 31. Trading operations of the retail activities resulted in a loss of A$3m, compared with an A$2.3m profit for 1977-78, although a loss, of A$1m, was also incurred in the second half last year.

The overall loss for the latest year was reduced to A$1.49m because of an A$1.9m equity accounted contribution from the 50 per cent owned finance company, Barclays Credit Corporation. Retail sales for the year rose 3.4 per cent to A$304m (U.S.$342m).

The interim dividend of 3.75 cents becomes the full payout for the year. In 1977-78, Waltons paid 7.5 cents a share.

● Major media group John Fairfax boosted group earnings almost 24 per cent, from A$ 7.85m to A$ 9.71m (U.S.$ 11.03m) in the year ended June 24.

The dividend for the year is 8.75 cents a share, paid on capital increased during the year by a one-for-four scrip issue. It represents a slightly effective payout increase on capital before the scrip issue.

The profit gain was achieved despite a loss of A$ 1.03m by the radio group, Macquarie Broadcasting Holdings, from October 29, when Fairfax acquired the company.

Upturn at Generale Occidentale

PARIS—Generale Occidentale, the Anglo-French banking and food group headed by Sir James Goldsmith, reports a net consolidated income for the exceptional nine-month accounting period ended March 31, at FFr 114.2m ($27.5m), compared with FFr 138.9m for the 12-months ended June 30, 1978. Before tax and exceptional items, consolidated profit was FFr 186.8m, against FFr 168.8m.

The group's share of consolidated income amounted to FFr 80.3m against FFr 102.4m. As previously reported, the parent company recorded a net profit of FFr 31.8m over the nine months against FFr 41.2m for the previous 12 months. Generale Occidentale will pay a net dividend of FFr 8, compared to FFr 7 for 1977-78.

At its annual general meeting last Friday the company explained that it expected to benefit from a "substantial" inflow of funds as a result of a reorganisation of its distribution network in the U.S. after its acquisition of the Grand Union and Colonial Stores chains.

Generale Occidentale said that at March 31, its long-term debt (excluding convertible bond issues in the process of conversion) stood at FFr 2.203bn, or roughly one-half of its FFr 4.37bn capital employed.
AP-DJ

Rinascente sales increase

MILAN — La Rinascente S.p.A., the leading Italian retail chain, reports sales in the first six months of 1979 higher by about 20 per cent from the like period of 1978 to more than L400bn ($495m). The company also said its costs during the period rose by only 16 per cent, suggesting that operating margins showed an improvement. Sales were particularly strong for furniture, men's clothing and sporting goods.

Rinascente said that it had reduced its debt-service costs by 11 per cent during the period, which "contributed substantially to consolidate the company's financial equilibrium."
Agencies

PENDING DIVS.

For the convenience of readers the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements, except where the forthcoming Board meetings (indicated thus*) have been officially published. It should be emphasised that the dividends to be declared will not necessarily be at the amounts or rates per cent shown in the column headed "Announcement last year."

	Date	Announcement last year
*APV	Sept. 27	Int. 2.2346
*Armstrong Equipment	Sept. 25	1.465
*BPC	Sept. 27	Int. 1.1
BSG Intl.	Oct. 16	Int. 0.916
*Barratt Devs.	Sept. 25	Final 5.53
*Bell (A.)	Sept. 26	Final 2.682
*Bentalls	Sept. 27	Int. 0.3
Berec	Oct. 27	Int. 1.2
Berkeley Hambro Prop.	Oct. 26	Int. 1.75
*Bilton (P.)	Oct. 1	Int. 3.375
*British Home Stores	Oct. 17	Int. 3.1
Brittains	Sept. 8	Int. 0.7
Brooke Bond	Oct. 17	Final 2.254
*Cape Inds.	Oct. 2	Int. 3.1946
Central and Sheerwood	Oct. 17	Int. 0.675
Coates Bros.	Oct. 19	Int. 0.865
Coral Leisure	Oct. 26	Int. 3
Dawnay Day	Oct. 18	Final 1.25
*Dunlop	Sept. 27	Int. 2.65
Dupont	Oct. 18	Int. 2.036
*EMI	Oct. 4	Final 5.97
Eastern Produce	Oct. 19	Int. 1.34
EDITH	Oct. 24	Int. 0.8
Furness Withy	Oct. 17	Int. 3.85
Gerrard Nat. Disc.	Oct. 19	Int. 4.0
Gill and Duffus	Oct. 25	Int. 2.3
*Hambro Life Assce.	Sept. 27	Int. 6
Hawker Siddeley	Oct. 19	Int. 2.105
*Highland Distilleries	Oct. 22	Final 2.224
Johnson & Firth Brown	Sept. 14	Final 3.459
*Kleinwort Benson	Sept. 25	Int. 1.8
*Laing (J.)	Sept. 26	Int. 1
Lister	Sept. 21	Final 1
London Brick	Oct. 26	Int. 1.4137
Marks and Spencer	Oct. 17	Int. 1.15
*Menzies (J.)	Oct. 10	Int. 1.275
Minet Hldgs.	Oct. 26	Int. 2.303
Minster Assets	Oct. 27	Int. 1.8
Mothercare	Oct. 23	Int. 1.138
Newman Inds.	Sept. 26	Int. 1.5
Newman-Tonks	Oct. 20	Final 3.153
Press (Wm.)	Oct. 26	Int. 0.4675
*RMC	Sept. 27	Int. 2.79
*Redland	Nov. 22	Int. 2.561
Rugby Ptlnd. Cement	Oct. 16	Int. 1.193
*600 Group	Nov. 29	Int. 2.0354
*Scottish Met. Prop.	Oct. 8	Final 1.073
*Senior Eng.	Oct. 9	Int. 0.8516
Spillers	Oct. 25	Int. 0.825
*Tate & Lyle	Sept. 26	Sec. int. 6.35
UBM	Oct. 18	Int. 1.964
Wilmot Breeden	Oct. 18	Int. 1.2

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

BASE LENDING RATES

A.B.N. Bank	14 %
Amro Bank	14 %
American Express Bk.	14 %
Henry Ansbacher	14 %
A P Bank Ltd.	14 %
Associates Cap. Corp.	14 %
Banco de Bilbao	14 %
Bank of Credit & Cmce.	14 %
Bank of Cyprus	14 %
Bank of N.S.W.	14 %
Banque Belge Ltd.	14 %
Banque du Rhone et de la Tamise S.A.	14½%
Barclays Bank	14 %
Bremar Holdings Ltd.	15 %
Brit. Bank of Mid. East	14 %
■ Brown Shipley	14 %
Canada Perm't Trust	14 %
Cayzer Ltd.	14 %
Cedar Holdings	14 %
■ Charterhouse Japhet	14 %
Choulartons	14 %
C. E. Coates	14 %
Consolidated Credits	14 %
Co-operative Bank	*14 %
Corinthian Secs.	14 %
Credit Lyonnais	14 %
The Cyprus Popular Bk.	14 %
Duncan Lawrie	14 %
Eagil Trust	14 %
English Transcont.	14 %
First Nat. Fin. Corp.	15½%
First Nat. Secs. Ltd.	15½%
■ Antony Gibbs	14 %
Grindlays Bank	‡14 %
■ Guinness Mahon	14 %
Greyhound Guaranty	14 %
■ Hambros Bank	14 %
■ Hill Samuel	§14 %
C. Hoare & Co.	†14 %
Julian S. Hodge	15 %
Hongkong & Shanghai	14 %
Industrial Bk. of Scot.	14½%
Keyser Ullmann	14 %
Knowsley & Co. Ltd.	15½%
Lloyds Bank	14 %
London Mercantile	14 %
Edward Manson & Co.	15 %
Midland Bank	14 %
■ Samuel Montagu	14 %
■ Morgan Grenfell	14 %
National Westminster	14 %
Norwich General Trust	14 %
P. S. Refson & Co.	14 %
Rossminster	14 %
Ryl. Bk. Canada (Ldn.)	14 %
Schlesinger Limited	14 %
E. S. Schwab	15 %
Security Trust Co. Ltd.	15 %
Shenley Trust	16 %
Standard Chartered	14 %
Trade Dev. Bank	14 %
Trustee Savings Bank	14 %
Twentieth Century Bk.	15 %
United Bank of Kuwait	14 %
Whiteaway Laidlaw	14½%
Williams & Glyn's	14 %
Yorkshire Bank	14 %

■ Members of the Accepting Houses Committee.
* 7-day deposits 11½%, 1-month deposits 11¾%.
† 7-day deposits on sums of £10,000 and under 11½%, up to £25,000 12%, and over £25,000 12¼%.
‡ Call deposits over £1,000 11½%.
§ Demand deposits 11½%.

RECENT ISSUES

EQUITIES

Issue Price p:	Amount Paid Up	Latest Renunc. Date	1979 High	1979 Low	Stock	Closing Price p:	+ or −	Div. or Amount	Times Covered	Gross Yield	P.E. Ratio
¶¶	F.P.	—	90	80	Barlow Hldgs.	87	......	T2.6	1.1	4.5	30.3
160	F.P.	5/9	193	182	Mercantile House	192	......	10.72	2.3	8.4	7.6
¶¶	F.P.	—	39	30	St. George Assets 10p	37	......	bd1.0	1.5	3.9	24.0
¶¶	F.P.	—	202	168	Seltrust A. Soc.	202	......	—	—	—	—

FIXED INTEREST STOCKS

Issue Price £	Amount Paid up	Latest Renunc. Date	1979 High	1979 Low	Stock	Closing Price	+ or −
¶91	F.P.	21/9	87	84	Aurora 8¼ Conv. Cum. Pref.	84	......
**	F.P.	21/9	107p	101p	Bradford Prop. 10½% Cum. Pref.	105p	+1
¶	£10	29/11	12	11⅛	Eastbourne Waterworks 9% Red. Pref.	11⅛	......
¶96½	£10	29/11	12¼	8¾	Essex Water 8% Red Pref. 1984	11⅝	......
¶¶	F.P.	—	75½	69¼	Lonrho 9% 2nd Mort. Deb. 87/92	69¼xd	......
¶¶	F.P.	—	90½	85	Do. 12½% 2nd Mort. Deb. 85-90	89xd	......
¶¶	F.P.	—	99	93	Do. 12⅞% 2nd Mort. Deb. 80-85	96xd	......
97	F.P.	24/8	99¼	97¾	Scot. Agricultural Sec. 13% Deb. 97-99	98	......
100p	—	7/9	103p	100p	Stonehill 10½% Cum. Prf.	102pm	......

"RIGHTS" OFFERS

Issue Price p:	Am'unt Paid up	Latest Renunc. Date ●	1979 High	1979 Low	Stock	Closing price p:	+ or −
14	F.P.	23/8 21/9	19	17	Abwood Machine Tools	18	......
110	F.P.	4/9 19/10	130	120	Bank Laumi	130	......
A$2	Nil	28/9 19/10	64pm	57pm	Bank of New South Wales	57pm	......
20	Nil	28/9 19/10	12pm	8pm	Banlox	8pm	......
A$4.58	Nil	— —	295pm	295pm	BH Proprietary	295pm	......
135	F.P.	21/9 12/10	151	142	Estates Property Inv.	151	......
R1.30	Nil	— —	5pm	1pm	F.U.G.I.T.	5pm	......
93	Nil	2/10 16/11	7pm	4½pm	Hepworth Ceramics	5½pm	+1
SM1.50	Nil	— —	16	15½	††Kulim	16	+½
30	F.P.	— —	43	36	Lennons	41pm	+1
110	F.P.	5/9 26/9	139	120	Letraset	133	+1
115	F.P.	14/9 12/10	147	120½	Macarthys Pharm.	145	−1
40	Nil	28/9 26/10	10pm	8pm	Nolton	8pm	......
A$3	Nil	— —	196pm	168pm	Peko-Wallsend	190pm	+10
¶¶	Nil	— —	162pm	76pm	Seltrust	98pm	−4
145	F.P.	13/9 19/10	224	193	Unitech	310	+2
10	F.P.	5/9 17/10	12½	10½	Yorkgreen Invs.	12½	+½

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimate. g Assumed dividend and yield. u Forecast dividend, cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1979. Q Gross. T Figures assumed. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends § Placing price to public. pt Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation, merger or takeover. ‖‖ Introduction. ☐ Issued to former preference holders. ■ Allotment letters (or fully-paid) ● Provisional or partly-paid allotment letters. ★ With warrants. †† Unlisted security. ‡‡ Issued as units comprising 2 Income shares and 10 Capital shares at 125p per unit.

Public Works Loan Board rates

Effective from September 22

Years	Quota loans repaid by EIP†	Quota loans repaid A‡	Quota loans repaid at maturity§	Non-quota loans A* repaid by EIP†	Non-quota loans A* repaid A‡	Non-quota loans A* repaid at maturity§
Up to 5	12¾	12¾	12¾	13¼	13¼	13¼
Over 5, up to 10	12¾	12¾	13	13¼	13¼	13½
Over 10, up to 15	13	13	13	13½	13½	13½
Over 15, up to 25	13	13	13	13½	13½	13½
Over 25	13	13	13	13½	13½	13½

* Non-quota loans B are 1 per cent higher in each case than non-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

CORAL INDEX: Close 458-463

INSURANCE BASE RATES

† Property Growth 12¾%
† Vanbrugh Guaranteed 12¼%
† Address shown under Insurance and Property Bond Table.

CURRENCIES, MONEY and GOLD

Sterling's long fall

BY COLIN MILLHAM

Sterling was extremely volatile and erratic last week, although the Bank of England seemed to take a relaxed view of the situation and allowed the market to sort itself out, without any heavy intervention.

On one or two mornings the pound fell sharply, touching $2.1260 on Monday and $2.1325 on Thursday, only to recover 2 or 3 cents in the afternoon as those who sold short were forced to cover positions.

Sterling, which briefly moved above $2.33 at the end of July has fallen a long way against the dollar, and even further in terms of the members of the European Monetary System.

An Irish punt would only buy buy 89p on July 26, but by the end of last week it was not far from parity again, and was quoted at around 98p.

With the Irish currency now effectively tied to the D-mark through the EMS the punt has become a much more stable currency than its British counterpart.

After reaching a peak of DM 4.24 against the D-mark at the end of July, sterling has now fallen to DM 3.83, and over the same period has dropped from FFr 9.86 to FFr 8.97 in terms of the French franc.

The Swiss franc, although not a member of the EMS, has shown a similar movement, reflecting the Swiss authorities desire to maintain the franc at its present level against the D-mark.

Until the recent weakness of the U.S. currency, the Swiss National Bank had helped to keep the franc on an even keel in terms of the D-mark by selling dollars.

Last week the Swiss central bank and the German Bundesbank joined the U.S. Federal Reserve in buying dollars to hold the dollar above DM 1.80 and SwFr 1.60 until Thursday, when their joint action seemed to be overcome by market pressure. The U.S. currency finished the week at its lowest level since just before President Carter's dollar support package on November 1.

GOLD

	September 21		September 20	
Gold Bullion (fine ounce)				
Close	$368-371	(£170.10-171.50)	$384-317	(£177.70-179.10
Opening	$373-375	£172.20-173.10)	$376-378	(£174.9-176.3)
Morning fixing	$373	(£172.167)	$375.35	(£175.561)
Afternoon fixing	$369.00	(£170.164)	$380.00	(£175.358)
Gold Coins				
Krugerrand	$378-381	(£174¾-176¼)	$391-394	(£181-182½)
Mapleleaf	$403-408		410-415	
New Sovereigns	$96-98	(£44¼-45¼)	$99-101	(£45¾-46¾)
King Sovs.	$109¼-112¼	(50½-52)	$109½-111½	(£51-52)
Victoria Sovs.	$116-118	(£54-55)	$116-118	(£54-55)
Fr 20 Napoleon	FFr410-425	(SFr156-161)	FFr416-425	(SFr155-165)
50 pesos Mexico	$463½-465½		$468-471	
100 Cor. Austria	$363-365		$369-372	
$20 Eagles	$486-490		$488-493	
$10 Eagles	$250-260		$252-262	
$5 Eagles	$210-225		$212-228	

OTHER MARKETS

Sept. 21	£	$		£ Note Rates
Argentina Peso	3139-3159	1450-1460	Austria	27¼-28¼
Australia Dollar	1.9125-1.9225	0.8840-0.8865	Belgium	63½-64½
Brazil Cruzeiro	62.45-63.45	28.85-29.30	Denmark	11.00-11.10
Finland Markka	8.19-8.21	3.7420-3.7480	France	8.95-9.05
Greek Drachma	—	36.45-36.60	Germany	3.78-3.88
Hong Kong Dollar	10.870-10.899	5.0380-5.0400	Italy	1,750-1,800
Iran Rial	151.50-159.00	70-73½	Japan	477-487
Kuwait Dinar (KD)	0.596-0.606	0.2762-0.2767	Netherlands	4.20-4.30
Luxembourg Frc.	61.40-61.50	28.96-28.98	Norway	10.65-10.80
Malaysia Dollar	4.650-4.6520	2.1490-2.1520	Portugal	103-110
New Zealand Dlr.	2.1575-2.1675	0.9970-1.0000	Spain	141½-144½
Saudi Arab. Riyal	7.22-7.32	3.3475-3.3575	Switzerland	3.38-3.48
Singapore Dollar	4.6360-4.6480	2.1470-2.1490	United States	2.15-2.17½
Sth. African Rand	1.7975-1.8125	0.8300-0.8315	Yugoslavia	44½-46½

Rate given for Argentina is free rate.

THE DOLLAR SPOT AND FORWARD

Sept. 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	2.1550-2.1755	2.1630-2.1640	0.35-0.25c pm	1.66	0.92-0.82 pm	1.61
Ireland†	2.1180-2.1350	2.1185-2.1205	1-0.80c pm	5.09	2.40-2.20 pm	4.34
Canada	1.680-1.1695	1.1685-1.1688	0.09-0.06c pm	0.77	0.20-0.17 pm	0.65
Nethlnd.	1.9425-1.9580	1.9535-1.9555	0.42-0.32c pm	2.27	1.33-1.23 pm	2.62
Belgium	28.28-28.50	28.41-28.44	2-3½c dis	−1.16	2½-4½dis	−0.49
Denmark	5.0750-5.1075	5.1045-5.1060	6.15-6.65oredis	−15.04	12.2-12.7dis	−9.75
W. Ger.	1.7625-1.7775	1.7665-1.7675	0.84-0.74pm pm	5.36	2.60-2.50 pm	5.77
Portugal	49.05-49.35	49.15-49.25	25-40c dis	−7.80	80-135dis	−8.74
Spain	66.02-66.07	66.03-66.05	30-50c dis	−7.27	100-115dis	−6.51
Italy	803.50-807.10	806.50-807.00	1.10-1.60liredis	−2.01	4.50-5.25dis	−2.39
Norway	4.9375-4.9910	4.9875-4.9900	0.35c pm-0.05dis	0.36	0.45pm-.05dis	0.16
France	4.1340-4.1600	4.1525-4.1550	0.30-0.37c dis	−0.97	0.69-0.78dis	−0.70
Sweden	4.1580-4.1720	4.1700-4.1710	par-0.20ore dis	−0.29	0.10-0.30dis	−0.19
Japan	221.60-223.00	222.30-222.50	1.00-0.85y pm	4.99	3-2.85 pm	5.26
Austria	12.89¾-12.80¾	12.75-12.76	4.50-4gro pm	4.00	13.50-12 pm	4.00
Switz.	1.570-1.5820	1.5720-1.5745	1.45-1.40c pm	10.87	4.45-4.40 pm	11.25

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

THE POUND SPOT AND FORWARD

Sept. 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.1550-2.1755	2.1630-2.1640	0.35-0.25c pm	1.68	0.92-0.82 pm	1.61
Canada	2.5170-2.5375	2.5265-2.5275	0.56-0.46c pm	2.37	1.50-1.40 pm	2.30
Nethlnd.	4.19-4.24	4.21¼-4.22¼	1¼-¾c pm	2.13	4¾-3¾ pm	4.03
Belgium	61.05-61.70	61.40-61.50	5c pm-5c dis	par	20-10 pm	0.98
Denmark	10.96-11.06	11.04-11.05	10-13ore.dis	−12.49	19-23 dis	−7.61
Ireland	1.0190-1.0270	1.0190-1.0205	24-34p dis	−3.41	80-90 dis	−3.30
W. Ger.	3.80-3.85	3.81½-3.82½	2¾-1¾pf pm	7.07	7¾-6¾ pm	7.20
Portugal	105.90-106.90	106.20-106.50	30-80c dis	−6.21	130-230 dis	−6.77
Spain	142.50-143.35	142.80-142.90	35-85c dis	−5.04	145-245 dis	−5.46
Italy	1734-1747	1746-1747	½lrepm-1½lredis	−0.34	2½-4½ dis	−0.80
Norway	10.62-10.78	10.75-10.76	2½-½ore pm	1.67	6¾-4¾ pm	1.95
France	8.96-9.01	8.98-8.99	¾c pm-¼c dis	0.33	2¾-1½ pm	1.45
Sweden	8.98-9.04½	9.02¾-9.03¾	1¼orepm-¾oredis	0.33	3-1 pm	0.89
Japan	475-485	480¾-481¾	2.85-2.65y pm	6.86	8.45-8.20 pm	6.92
Austria	27.40-27.67	27.57-27.62	17-7gro pm	5.22	43-33 pm	5.51
Switz.	3.39-3.43	3.39½-3.40½	3¾-2¾c pm	11.47	11-10 pm	12.35

Belgian rate is for convertible francs. Financial franc 64.10-64.20c pm
Six-month forward dollar 1.62-1.52c pm, 12-month 3.20-3.10c pm

EXCHANGE CROSS RATES

Sept. 21	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'r	Italian Lire	Canada Dollar	Belgian Franc
Pound Sterling	1.	2.164	3.820	481.3	8.985	3.400	4.223	1747.	2.527	61.46
U.S. Dollar	0.462	1.	1.765	222.4	4.153	1.572	1.952	807.5	1.168	28.40
Deutschemark	0.262	0.566	1.	126.0	2.352	0.890	1.105	457.2	0.662	16.09
Japanese Yen 1,000	2.078	4.496	7.938	1000.	18.67	7.065	8.774	3629.	5.251	127.7
French Franc 10	1.113	2.408	4.253	535.6	10.	3.784	4.699	1944.	2.812	68.39
Swiss Franc	0.294	0.636	1.124	141.5	2.643	1.	1.242	513.7	0.743	18.07
Dutch Guilder	0.237	0.512	0.905	114.0	2.128	0.806	1.	413.6	0.598	14.55
Italian Lira 1,000	0.573	1.239	2.187	275.6	5.145	1.947	2.415	1000.	1.447	35.16
Canadian Dollar	0.396	0.856	1.512	190.4	3.556	1.346	1.671	691.1	1.	24.33
Belgian Franc 100	1.627	3.521	6.216	783.2	14.62	5.533	6.871	2842.	4.112	100.

LONDON MONEY RATES

Sept. 21 1979	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount market deposits	Treasury Bills ♦	Eligible Bank Bills ♦	Fine Trade Bills ♦
Overnight	—	13¼-14¼	—	—	—	—	13⅞	13-14	—	—
2 days notice	—	—	13¾-14	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	13¾-14	13⅞-14⅛	—	14⅛	14⅛	13⅞	—	—	—
One month	14¼-13⅞	13⅞-14	14⅛	—	15⅛-14⅞	14⅛	14⅛	13⅞	14-13¾	14⅝
Two months	14⅛-14	14-14⅛	—	—	15⅛-14⅞	14⅛	—	13⅞	13⅞	14⅝
Three months	14⅛-14	14⅛-14⅛	14⅛-14⅛	14⅛-13⅞	14⅛	14⅛	14⅛	13⅞	13⅞-13⅞	14⅝
Six months	14⅛-13⅞	14-14⅛	—	14⅛-13⅞	14⅛	—	—	—	13⅞	14⅝
Nine months	13⅞-13⅞	13⅞-13⅞	—	13⅞-13⅞	14⅛	—	—	—	—	—
One year	13⅞-13⅞	13⅞-13⅞	13⅞-13⅞	13⅞-13⅞	14	—	—	—	—	—
Two years	—	—	13-13⅞	—	—	—	—	—	—	—

Local authority and finance houses seven days' notice others seven days fixed. *Long-term local authority mortgage rates nominally three years 13-13⅜ per cent; four years 12⅞-13⅛ per cent; five years 12⅞-13⅛ per cent. ♦Bank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 13⅝ per cent; four-month trade bills 14⅝ per cent.

Approximate selling rate for one-month Treasury bills 13 9-64ths-13⅛ per cent; two-month 13 19-64ths per cent; three-month 13⅛ per cent. Approximate rates for one-month bank bills 14⅛-14⅛ per cent; two-month 14⅛-14⅛ per cent and three-month 14⅛ per cent; one-month trade bills 14⅝ per cent; two-month 14⅞ per cent; three-month 14⅞ per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 14½ per cent from September 1, 1979. Clearing Bank Deposit Rates for small sums at seven days' notice 11½-12 per cent. Clearing Bank Rates for lending 14 per cent. Treasury Bills: Average tender rates of discount 13.4131 per cent.

CURRENCY RATES

Sept. 21	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	14	0.605889	0.651617
U.S. $	12	1.30901	1.40844
Canadian $	11.93	1.52932	1.64567
Austria Sch	3¾	16.7329	17.9140
Belgian F	9	37.2002	40.0740
Danish K	11	6.66250	7.19960
D Mark	6	2.32114	2.49726
Guilder	7	2.55781	2.75370
French Fr	9½	5.45394	5.85343
Lira	10½	1064.75	1156.01
Yen	5¼	289.815	313.418
Nrwgn. K	7	6.47966	7.02749
Spanish Pes	8	86.4117	93.0867
Swedish Kr	6	—	5.88118
Swiss Fr	1	2.06662	2.22128

هكذا من الأصل

INSURANCE

The challenge of tighter regulation

BY OUR INSURANCE CORRESPONDENT

THIS WEEK insurance men and women will gather in Bristol for the annual conference of the Chartered Insurance Institute, the professional body with over 50,000 members drawn from all sectors of the industry—the companies, Lloyd's, and brokers.

The conference pattern is well established: by tradition there is a formal business session on the Friday, when the president and other officers are elected for the year. On the Thursday papers are presented, usually by leading insurance personalities, for consideration and discussion on the day—and for wider dissemination subsequently via the insurance press.

Not surprisingly the theme of this year's papers is The Challenge of the 80s. Three aspects have been selected—The Regulatory Environment, The Response of the Market and The Response of Management. Papers on these topics are being presented respectively by Ronald Skerman, of the Prudential, David Palmer, of Willis Faber and Dumas, and Geoffrey Kellet, of Royal Insurance. They should give management and rank and file members much food for thought and reason to question the certainty of their future course of business.

Harmonisation

It is clear, whatever the political colour of the Government, that the British insurance industry faces increasing regulation in the next 10 years—if only because of Britain's membership of the EEC. Over the years the creed of British insurance has been "freedom with responsibility," while the Europeans have opted for greater governmental control. The process of harmonisation—unless Britain remains obdurate or achieves more by persuasion than seems possible—must alter the existing British balance between self discipline and government regulation. The question that only time will resolve is how far that balance will be changed.

The traditional divisions of insurance business — accident, fire, marine and life—have in recent years, for accounting, supervisory and some other purposes given way to the distinction between long-term business (life, pensions, permanent health) and the rest. But now a new division between commercial and personal business is developing: the pressure here is from consumers.

British insurers have already recognised that in practice personal business must be handled differently—two years ago they agreed with government statements of insurance practice which protect the consumer from the full rigours of British insurance law. This recognition has already led to the question being asked by the Law Commissioners—if the industry is prepared to deal differently with private policyholders, why can it not accept legislation to make that practice firm law?

Distinction

Pressure at home is echoed abroad, for in the discussions on the draft of the EEC's non-life service directive the majority of Europeans are intent on creating a distinction between large risks and mass risks (not synonymous with commercial and personal insurances) and having different rules applicable thereto.

Faced with such pressures for change, many insurance men and women may think they should concentrate on the job in hand and worry about tomorrow when it comes.

But all have to live in a changing regulatory environment and there is no reason to bury heads in the sand. Workers in insurance can help shape the future provided the problems are clearly recognised, logically considered and firmly resolved. The discussions on Thursday in Bristol should engender a greater awareness of the challenge that the 1980s will pose to this country's pre-eminent international insurance position.

Hospital waiting lists up 25%

HOSPITAL WAITING lists in south-west England have increased by 25 per cent in five years, says the Regional Health Authority. It gives two reasons — the ageing population and industrial action.

Mr. Brian Bailey, chairman of the authority, says the size of the lists is a "major cause for concern."

APPOINTMENTS

New directors for Portals Holdings

Mr. B. J. F. Dewson and Mr. J. A. Hamilton have been appointed directors of PORTALS HOLDINGS.

*

The following appointments have been made to the board of ROWNTREE MACKINTOSH INC., New York, a subsidiary of Rowntree Mackintosh Limited: Mr. K. Haslinger (chairman), Mr. R. Sugden (president), Mr. T. Copley, Mr. R. Hamilton and Mr. J. F. Main. Mr. Haslinger, Mr. Copley and Mr. Main as directors of the parent concern; Mr. Sugden is at present president of Rowntree Mackintosh Canada and Mr. Hamilton is a member of the Rowntree Mackintosh export division. Rowntree Mackintosh Inc. will be responsible for the development of Rowntree Mackintosh brands in the U.S. other than Kit Kat, Rolo and After Eight Mints which are manufactured and marketed under licence by Hershey Foods Inc.

*

Mr. Ron Cooper succeeds Mr. Mr. Raymond Prosser from next week as principal establishment and finance officer at the DEPARTMENTS OF TRADE AND INDUSTRY. His responsibilities include the management of staff and central finance for the two departments. Mr. Cooper has been secretary of the Price Commission since January, 1979. Mr. Prosser is retiring.

*

Dr. James S. McFarlane is to become an executive director of GUEST KEEN AND NETTLEFOLDS from October 1. His previous position was general manager personnel.

*

Mr. A. J. McMinn has resigned as managing director of BSP INTERNATIONAL FOUNDATIONS and from the Board of the company and its subsidiaries. The company is a member of the Edward Le Bas group.

*

Mr. J. L. Harvey, a non-executive director of LAPORTE INDUSTRIES (HOLDINGS has been appointed vice-chairman. Mr. M. J. Evans, an executive director of Siegfriend Aktiengesellschaft, Switzerland, manufacturer of fine chemicals and pharmaceuticals, has been made a non-executive of Laporte.

*

Mr. R. A. F. Ostime has been appointed general manager of PROVIDENT LIFE ASSOCIATION OF LONDON. Mr. B. E. Radley becomes general manager and actuary, and Mr. J. D. Fox assistant general manager and secretary. Mr. R. K. Muddle, the life manager, will be appointed to the management committee of the company. Mr. M. Wise has been made chief accountant. Mr. Ostime has also been appointed general manager of the subsidiary United Standard Assurance Company and Mr. D. Hinchcliffe becomes assistant general manager of that concern.

Mr. Robin Napier

*

Mr. Robin Napier has joined the Board of STANDARD FIREWORKS as a non-executive director. Mr. Napier is an executive director of London merchant bankers Charterhouse Japhet and is chairman of its Manchester subsidiary, Charterhouse Japhet (Northern).

*

Mr. D. A. H. Baer has been appointed a director of F. AND C. EUROTRUST. Mr. C. G. G. Wainman retires from the board after the annual meeting on October 23, 1979, and Mr. D. A. H. Baer will succeed him as chairman.

*

Mr. Iain MacDonald has been appointed commercial and industrial attache to the DELEGATION GÉNÉRALE DU QUEBEC IN LONDON.

*

Mr. Richard L. Desmond has joined BABCOCK INTERNATIONAL as group treasurer. He was previously assistant treasurer of Esso Petroleum.

*

Mr. Alex Bell has been appointed deputy chairman of Derek Crouch Construction Company, and chairman of Derek Crouch (Sales). Mr. Charles Sanders, the present chairman of the sales company, will continue as a non-executive member of the Main Board of the parent concern DEREK CROUCH after he hands over to Mr. Bell on January 1, 1980.

WORLD STOCK MARKETS

Indices

NEW YORK—DOW JONES

	Sept 21	Sept. 20	Sept. 19	Sept. 18	Sept. 17	Sept. 14	1979 High	1979 Low	Since Compil't'n High	Since Compil't'n Low
● Industr'ls	893.94	895.69	876.45	874.15	881.51	879.70	893.69 (20/9)	807.00 (27/2)	1051.70 (11/73)	41.22 (2/7/32)
H'me B'nds	83.47	83.46	83.57	83.40	83.51	83.50	86.10 (15/8)	82.52 (8/5)	—	—
Transport	265.24	264.37	263.15	263.68	265.87	265.80	271.77 (15/8)	205.78 (27/2)	279.88 (7/2/69)	12.23 (8/7/32)
Utilities	106.29	107.80	106.51	106.28	107.17	107.08	109.61 (23/8)	98.51 (15/5)	163.32 (20/4/69)	10.58 (28/4/42)
Trading Vol 000's†	52,630	45,210	35,440	38,880	37,820	42,080	—	—	—	—

● Day's high 902.13 low 886.52

Ind. div. yield %	Sept. 14	Sept. 7	Aug. 31	Year ago (approx)
	5.65	5.67	5.58	5.39

STANDARD AND POORS

	Sept. 21	Sept. 20	Sept. 19	Sept. 18	Sept. 17	Sept. 14	1979 High	1979 Low	Since Cmpil't'n High	Since Cmpil't'n Low
‡Indust'ls	123.46	123.56	120.76	120.50	121.31	121.25	123.56 (20/9)	107.08 (27/2)	134.54 (11/1/73)	3.52 (30/6/32)
§Composite	110.47	110.51	108.28	108.00	108.84	108.76	110.51 (20/9)	96.13 (27/2)	125.85 (11/1/73)	4.40 (1/6/32)

	Sept. 19	Sept. 12	Sept. 5	Year ago (approx)
Ind. div. yield %	5.06	5.05	5.12	4.85
Ind. P/E Ratio	8.04	7.74	7.87	9.45
Long Gov. Bond Yield	9.15	9.11	9.11	8.47

N.Y.S.E. ALL COMMON

Sept. 21	Sept. 20	Sept. 19	Sept. 18	1979 High	1979 Low
62.88	62.85	61.76	61.62	62.88 (21/9)	53.88 (27/2)

Rises and Falls

	Sept. 21	Sept. 20	Sept. 19
Issues Traded	1,921	1,885	1,875
Rises	846	923	687
Falls	661	581	720
Unchanged	414	381	468
New Highs	—	91	47
New Lows	—	43	38

MONTREAL

	Sept. 21	Sept. 20	Sept. 19	Sept. 18	1979 High	1979 Low
Industrial	317.10	315.95	310.76	310.45	317.10 (21/9)	219.19 (2/1)
Combined	305.45	302.50	298.49	298.32	303.45 (21/9)	225.90 (2/1)
TORONTO Composite	1740.9	1737.0	1721.5	1718.1	1740.9 (21/9)	1316.8 (2/1)
JOHANNESBURG Gold	358.1	(u)	352.5	358.1	358.1 (18/9)	228.4 (17/4)
Industrial	362.5	(u)	359.4	355.6	362.3 (21/9)	270.5 (2/1)

	Sept. 21	Previous	1979 High	1979 Low
Australia (¶)	871.46	871.85	676.77 (17/9)	545.72 (2/1)
Belgium (‖)	106.89	105.16	109.00 (5/7)	98.80 (8/1)
Denmark (**)	95.25	95.25	97.46 (25/7)	88.32 (8/1)
France (††)	102.2	100.2	102.2 (21/9)	71.6 (15/2)
Germany (‡‡)	758.80	769.2	839.6 (16/1)	719.4 (7/6)
Holland (§§)	74.1	75.6	85.9 (24/1)	71.3 (7/6)
Hong Kong (¶¶)	615.41	612.54	626.78 (13/8)	493.83 (2/1)
Italy (‖‖)	90.33	89.46	90.33 (21/9)	68.36 (2/1)
Japan (a)	456.42	455.50	462.97 (31/1)	436.13 (13/7)
Singapore (b)	405.21	402.80	406.30 (17/8)	346.34 (23/2)
Spain (d)	91.12	91.11	111.96 (8/5)	91.07 (14/9)
Sweden (e)	353.31	355.89	401.34 (6/2)	333.31 (21/8)
Switzerld (f)	325.7	326.4	329.1 (2/5)	294.0 (3/1)

Indices and base dates (all base values 100 except NYSE All Common — 50; Standards and Poors—10; and Toronto 300—1,000; the last named based on 1975). † Excluding bonds. ‡ 400 Industrials. § 400 Industrials, 40 Utilities, 40 Finance and 20 Transport. ¶ Sydney All Ordinary. ‖ Belgian SE 31/12/63. ** Copenhagen SE 1/1/73. †† Paris Bourse 1961. ‡‡ Commerzbank Dec. 1953. §§ Amsterdam Industrial 1970. ¶¶ Hang Seng Bank 31/7/64. ‖‖ Banca Commerciale Italiana 1972. a Tokyo New SE 4/1/68. b Straits Times 1966. c Closed. d Madrid SE 29/12/78. e Stockholm Industrial 1/1/58. f Swiss Bank Corporation. u Unavailable.

FRIDAY'S ACTIVE STOCKS

	Stocks traded	Closing price	Change on day
Occidental Per.	892,300	27	−⅞
Gulf Oil	806,300	34¼	−⅞
Texaco	748,700	30½	−⅛
OK Gas-Ele.	708,900	15⅞	−⅛
Am. Tel. & Tel.	647,600	55	−⅛
Mobil	629,300	53½	−2½
IBM	625,600	70	−1⅜
General Motors	532,600	64⅞	+⅜
Itek	511,300	31⅜	+2⅞
RLC Corp.	510,500	11⅜	+¾

EUROPE

AMSTERDAM

Sept. 21	Price Fls.	+ or —	Div. %	Yld. %
Ahold (Fl.20)	89.5	−1.0	22	4.9
Akzo (Fl.20)	28.70	+0.5	—	—
Alg'mBk (Fl100)	354.0	+3.0	A25	7.5
Amev (Fl.10)	99.0	+1.4	60	6.1

BRUSSELS/LUXEMBOURG

Sept. 21	Price Frs.	+ or —	Div. Frs. Net	Yld. %
Arbed	2,590	+5	—	—
Bekaert "B"	2,330	+15	130	5.6
C.B.R. Cement	1,052	+2	80	7.6

SPAIN

September 21	Per cent	
Asland	106	—
Banco Bilbao	248	—
Banco Central	274	—
Banco Exterior	255	—
B. Granada (1,000)	134	—
Banco Hispano	242	—
Bco. I. Cat. (1,000)	153	—

TOKYO ¶

Sept. 22	Prices Yen	+ or —	Div. %	Yld. %
Asahi Glass	393		14	1.8
Canon	610	−1	12	1.2
Casio	780	−10	25	1.6
Chinon	359	+4	20	1.4
Dai NipponPrint	560	−4	18	1.6
Fuji Photo	654	+3	15	1.1
Hitachi	269	+3	12	2.2

COPENHAGEN

VIENNA

GERMANY

STOCKHOLM

SWITZERLAND

MILAN

OSLO

PARIS

BRAZIL

HONG KONG

AUSTRALIA

JOHANNESBURG

Financial Rand U.S.$0.87½ (Discount of 27½%)

WALL STREET

NEW YORK

CANADA

INTERNATIONAL BONDS — BY FRANCIS GHILES

A flood of Deutsche Mark issues

THE TURMOIL in the gold and foreign exchange markets last week was fully reflected in the international bond markets.

Demand for the harder currency bonds, Deutsche Mark and Swiss franc issues in particular, was strong.

At its monthly meeting the German Capital Markets Sub-Committee agreed to the largest new issue calendar of foreign Deutsche Mark bonds (DM 950m) since last December.

But a further "jumbo" private placement of DM bonds for the EEC was widely expected to be added to this figure. It is also believed that the EEC, supplementing its Ortoli financing facility, could be in the market shortly for up to DM 600m.

Meanwhile, some German bankers suggested that one of the new Deutsche Mark issues, for the World Bank, was expected to be placed directly with the Saudi Arabian Monetary Agency.

During the past four weeks, DM 1.32bn worth of issues have been floated, again the highest figure in ten months. Initially, the Sub-Committee had agreed on a new issue calendar until September 20 amounting to DM 750m.

Not all German bankers were sure that the DM 950m could be easily absorbed. One particular factor of concern is the high funding requirements of the Republic next month. Nevertheless DM 475m worth of new Deutsche Mark paper was floated last week, not all of which was initially planned.

The next four weeks' calendar will be opened tomorrow by a Dresdner Bank with a DM100m public offering for Oesterreichische Kontrollbank; Westdeutsche Landesbank will follow with a DM50m bond for a European address later next week; on October 3, DG Bank will announce a DM100m issue for an unknown borrower while a DM50m issue for a South African address is expected from Deutsche Bank on the 5th.

On October 15, Dresdner Bank will announce a DM100m offering for an unknown address and the following day Westdeutsche Landesbank will announce a DM50m one for a European address.

On October 17, Deutsche Bank will announce a DM150m bond and two days later Commerzbank will close the list with a DM100m issue.

Two issues for the World Bank, totalling DM250m, are also expected, one of which should finish up in the Middle East.

DM issues announced last week included a DM 100m private placement for the Asian Development Bank and two private placements for Eurofima through Deutsche Bank, which also arranged a DM 50m private placement for Arbed. Westdeutsche Landesbank brought two borrowers to the market, Petrobras and Roylease, in both cases for amounts higher than initially expected.

Secondary market prices of DM bonds weakened in the early part of the week under the weight of new issues but recovered lost ground later on.

Initial conditions indicated on the Council of Europe issue, managed by BHF Bank, were slightly improved to attract stronger investor demand. The weakness in pre market trading which hit this issue stemmed from the fact that one of the Eurofima private placements announced on Monday offered a similar yield for shorter maturity paper.

Swiss bankers also say they witnessed a noticeable increase in demand for bonds in their sector of the market. Older bonds posted gains of about ½ on the week while the new issue for BMW, which was trading last Friday for the first time, finished at 102 after being priced at par. Turnover was higher than at any time in recent weeks.

Convertibles were the major feature of the dollar bond market last week. Three Japanese convertibles were unveiled and gained a good reception, thanks to the rise of the Yen against the dollar and the strong advance of the Tokyo stock exchange.

The $60m convertible for Mitsubishi-increased from an initial $50m—found a welcome reception and the issue was closed earlier than initially planned.

Morgan Stanley, the manager, also cut the indicated coupon by ½ point to 6¼ per cent.

The option feature which gives investors the right to redeem the issue at a premium in 1984, ten years before final maturity, to raise the yield to about 10 per cent, proved to be a valuable incentive. A similar feature was to be found in the two other Japanese convertibles which were launched last week—Meidensha Electric and Daiei Incorporated. A further convertible, for Charter Oil, was launched last Friday.

The only other dollar issue last week was a $100m FRN for the Philippines through Credit Suisse First Boston. No new straight dollar issue has been launched for seven weeks now.

Dollar bond prices ended the week very mch where they had started, the market having spent much of its time following the ups and downs of the New York bond market.

Few investors were in the market and those which were seemed more interested in high quality names which boast rich coupons and good sinking funds. By and large, however, the investors' strike continues. The rise in prime U.S. bank rates to a record 13¼ per cent and the sharp fall in the value of the dollar coupled with the surge in the price of gold were sufficient reminder that the market faces a long period of uncertainty.

Many banks in Europe would agree with the pungent comment made by Ross and Partners (Securities) in their weekly comment to investors: "The Fed should perhaps employ pschologists as advisers rather than economists."

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m	Maturity	Av. life years	Coupon %	Price	Lead manager	Offer yield %
U.S. DOLLARS							
‡§Nippon Seiko	30	1994	—	7½	100	Kleinwort Benson, Nomura	7.38
†Fiat Finance	100	1991	10	8¼‖	100	Crédit Lyonnais	—
**†Eurofima	40	1989	8½	5¼@	100	Dean Witter Reynolds	5.32@
‡§Mitsubishi Corp.	60	1984-94	—	6¼	100	Morgan Stanley Int.	6.61
†Philippines	100	1986	7	6¼@	100	Crédit Suisse First Boston	6.61@
§Meidensha Electric	20	1984-94	—	7½	100	Daiwa (Europe)	7.38
§Daiei Inc.	50	1984-94	—	7	100	Merrill Lynch	7.12
§Charter Oil	35	1994	—	8¼	100	E.F. Hutton Int. Inc.	8.25
D-MARKS							
‡Council of Europe	125	1989	8	7½	100½	BHF-Bank	7.46
Petrobras	125	1989	8	8	*	WestLB	*
‡**Eurofima	100	1984	5	7	99½	Deutsche Bank	7.12
‡**Eurofima	40	1987	8	7¾	100	Deutsche Bank	7.375
‡**Arbed	50	1987	8	7½	100½	Deutsche Bank	7.46
‡**Roylease (g'teed Royal Bank of Canada)	60	1984	5	6¾	100	WestLB	6.75
‡**Asian Dev. Bank	100	1991	12	7½	99½	Bay. Vereinsbank	7.56
SWISS FRANCS							
‡BMW Overseas	100	1991	n.a.	4¼	100	Union Bank of Switz.	4.25
‡City of Copenhagen	60	1991	n.a.	4½	99	Union Bank of Switz.	4.61
‡**§Minolta Camera	50	1985	—	4½	100	Union Bank of Switz.	4.55
‡**N. Zealand Nat. Prov. Fund	75	1984	n.a.	4¼	100	Swiss Bank Corp.	4.25
‡**S. African Railways (g'teed S. Africa)	20	1984	n.a.	5½	100	Crédit Suisse	5.50
Malaysia	80	1989	n.a.	5	99½	Swiss Bank Corp.	5.10
‡**§Jujo Paper	35	1984	—	4½	100	Swiss Bank Corp.	4.68
Norges Kommunalbank (g'teed Norway)	100	1991	n.a.	4¾	100	B. Gutzwiller, Kurz, Bungener	4.75
FRENCH FRANCS							
Finland	80	1984	5	11	100	BNP	11.0
Finland	70	1989	8½	11½	99¾	BNP	11.54
KUWAITI DINARS							
Asea AB	4	1989	*	8	*	KIIC	*

* Not yet priced. ‡ Final terms. ** Placement. † Floating rate note. @ Minimum. § Convertible. †† Registered with U.S. Securities and Exchange Commission. ¶ Purchase fund. ‖ Optional fixed rate. Note: Yields are calculated on AIBD basis.

EURO DOLLAR FINANCING — BY JOHN EVANS

Welcoming mat out for U.S. groups

THE PROSPECT of some sort of credit squeeze in the U.S. capital markets appears to be encouraging American corporate borrowers to pin down alternative funds in the Eurodollar market.

In an unusual development, the U.S. emerged as the largest single borrower, among the industrialised nations on the medium and long-term Eurocurrency markets in August.

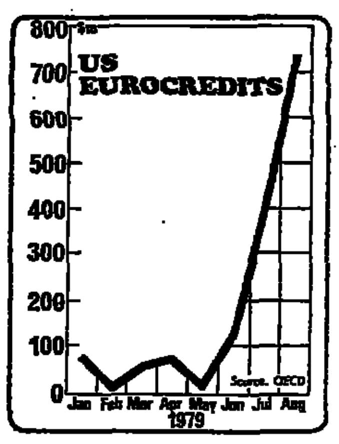
U.S. corporations contracted $735m of credits last month, up from $415m in July. This was the largest total of any nation in the Organisation for Economic Co-operation and Development, apart from Turkey which signed $2.21bn of loans, reflecting its recent debt-restructuring agreements, according to data compiled by the OECD.

So far this year, U.S. borrowers are responsible for $1.5bn of syndicated credits.

U.S. loans last month were headed by Amdahl Corporation, the West Coast computer group, which raised a total of $260m. It was followed by Coastal States Gas, which arranged $100m in the Euromarkets and a companion $100m in the U.S. domestic market.

Diamond Shamrock Corporation borrowed a total of $195m, while American Petrofina Exploration Company raised $180m.

U.S. corporations, with a large domestic capital market and a variety of funding sources to choose from, normally find little need to turn to syndicated Eurocredits, bankers say.



Underlying much of this latest corporate demand for Eurodollars is the growing belief that the U.S. may be heading for a tough credit crunch.

Loan demand at the U.S. money centre banks is still running at high levels, while the banks themselves are said to be concerned about their gearing ratios and limits to specific borrowers.

In addition, recent nervousness in the U.S. commercial paper market, in part linked to Chrysler's problems, represents another element. When commercial paper availability dries up, borrowers have to turn to their banking standby lines.

In fact, warnings were being voiced in New York late last week that growing illiquidity among U.S. corporations may exert additional pressure on short-term interest rates.

Loan demand jumped $934m at the big New York banks in the latest reporting week, a reflection of corporate needs to finance expanding inventories as the economy slows, as well as the impact of the September 15 tax payment date.

Bankers also suggest that the closure of the Eurodollar straight-debt bond markets since August, after a heavy bout of U.S. corporate borrowing in Eurobonds earlier in the year, is an influence. Eurocurrency credit represents an alternative source of funding for companies whose planned Eurobond flotations had to be shelved.

U.S. corporations are also active in financing themselves overseas through other techniques.

The British division of PHH Group, the large U.S. car and truck leasing concern, is arranging a £50m syndicated bank line in London, an unusually large credit in domestic sterling.

This facility will remove the need for the parent to raise domestic U.S. funds for its British associate.

Meanwhile, the California Federal Savings and Loan Association, has just become the first U.S. institution of its type to arrange a placement of Eurodollar Certificates of Deposit, in a $10m operation.

The move by S & L to tap the Eurodollar market has been under consideration for some months.

S & L believes that the Eurodollar pool can provide it with several billion dollars of financing over the next few years, at rates equivalent to or slightly lower than those available in New York.

U.S. BONDS — BY STEWART FLEMING

Fight over interest rates

THE RECENT slide in bond prices which has accompanied moves by the Federal Reserve Board to tighten credit petered out towards the end of last week, but with forthcoming inflation data expected to show no significant easing in the pace at which prices are rising and the dollar again under pressure, the respite could prove short-lived.

The consumer price index for August will be released this week and the producer price index for September the following week.

At the beginning of the week bond prices continued their declines ahead of Tuesday's meeting of the Federal Open Market Committee, the Federal Reserve Board monetary policy arm. It was widely expected that the committee would vote for a further significant tightening of credit which would push interest rates higher.

In the event not only did the Fed's open market operations suggest that it had increased its average weekly target on Federal funds only modestly—to around 11½ per cent—for the moment, but in addition the Board arrived at its decision to increase the discount rate to 11 per cent by a narrow four to three margin.

The emergence of a block of Board members opposing further tightening in credit and the modest extra upward pressure the Fed has exerted on money market rates have both combined to encourage some investors to conclude once again that U.S. interest rates could be peaking.

The foreign exchange markets, on the other hand, were disturbed that last week's decisions by the Federal Reserve could indicate some weakening of its resolve to fight inflation.

But observers are pointing out that while Mr. Paul Volcker, the Fed chairman, must now deal with a block of three governors apparently questioning the need to tighten credit further, the three governors who voted with him are likely to continue to provide solid support.

In addition, there could well be stronger support for the Fed's recent moves to tighten credit on the central banks' 12-member open market committee.

For these reasons the governors' narrow vote on the discount rate increase needs to be kept in perspective.

On the other hand, there is clearly growing concern among some politicians in Washington that the recent increase in interest rates will deepen the U.S. recession, and it is becoming more vocal.

Senator Edward Kennedy in particular has let it be known that he feels interest rates may well have risen far enough. This represents a significant strengthening of political pressures against further steps by the Fed to tighten credit for the senator is steadily moving closer to a decision to challenge the weakened President Carter for the Democratic Party's nomination as its candidate in next year's presidential election.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS

	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]						

YEN STRAIGHTS

	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]						

OTHER STRAIGHTS

	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]						

DEUTSCHE MARK STRAIGHTS

	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]						

SWISS FRANC STRAIGHTS

	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]						

FLOATING RATE NOTES

	Spread	Bid	Offer	C.dte	C.cpn	C.yld
[illegible]						

CONVERTIBLE BONDS

	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
[illegible]						

BONDTRADE INDEX AND YIELD

	Medium term		Long term	
Sept. 21 ...	93.52	9.37	86.24	10.05
Sept. 14 ...	93.67	9.31	86.37	10.02
High '79 ...	95.75	(1/2)	89.99	(30/1)
Low '79 ...	93.52	(21/9)	86.24	(21/9)

EUROBOND TURNOVER (nominal value in $m)

	Cedel	Euroclear
U.S. $ bonds		
Last week	496.0	1,284.2
Previous week ...	580.2	1,525.5
Other bonds		
Last week	341.0	295.0
Previous week ...	223.6	317.3

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month) for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Arab Company for Trading Securities SAK; Kredietbank NV; Credit Commercial de France; Credit Lyonnais; E. F. Hutton Services SARL; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bankers Trust International; Bondtrade; Banque Francaise de Credit International; Citicorp International Bank; Daiwa Europe NV; Deltec Trading Company; Dillon, Read Overseas Corporation; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Merrill Lynch; Morgan Stanley International; Nesbitt Thomson; Samuel Montagu and Co.; Scandinavian Bank; Strauss Turnbull and Co., Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on September 21

FINANCIAL TIMES SURVEY

Monday September 24 1979

Defence Equipment Industries

Armaments look like remaining one of the world's biggest industries for some time to come, with projected national expenditures running into many billions of dollars. Preservation of the balance of power between East and West continues to provide the main thrust to the market, but Third World countries are a growing presence.

Big spending continues

By Michael Donne, Aerospace Correspondent

THROUGHOUT THE world, spending on armaments of all *kinds continues unabated, as it* has done since the end of the Second World War. Continued *political instability, coupled with* a growing desire from emerging Third World countries to develop *their armed forces,* and the efforts on the part of NATO to boost defence spending on *conventional arms to combat the* rapid build-up of conventional weapons by the Warsaw Pact *forces, are all playing a part in* this continued emphasis on arms procurement.

It is estimated that, last year, total world spending on defence, including procurement of weapons of all kinds but excluding the Warsaw Pact nations and China, amounted to well over \$350bn and that if spending by those two blocs are also included the total is probably well over \$400bn. The figure has been rising steadily *for years, partly of course* because of inflation, but also because of an increase in the *volume of armaments* being being acquired world-wide.

Budget

In the UK alone, the defence budget for 1979-80 is estimated at nearly £8.6bn, or just under 4½ per cent of the Gross Domestic Product for the year at market prices, representing an increase in real terms of 3 per cent over the 1978-79 figure. For 1980-81, the Government's plans provide for a further real increase of 3 per cent.

While no decision has been taken on UK defence budget levels for 1981-82 and 1982-83, it *seems likely that further* increases in real terms will be made.

The reason is that, as has been clear for some time, the *Warsaw Pact countries have* been increasing their own defence expenditure, and it is estimated that Soviet defence spending alone now accounts for about 11 to 13 per cent of the Gross National Product, having risen by an average rate of about 4 per cent a year in real terms between 1973 and 1977, and is still rising, although perhaps more slowly. This year's UK Defence White Paper made it clear that a high proportion, probably well over a third, of all Soviet and Warsaw Pact defence spending is on the procurement of new weapons and over a fifth of the total is spent on research and *development of high-technology* weapons systems, including especially missiles, both land *and submarine-based.*

At the same time however according to the UK Defence White Paper, much of the Soviet and Warsaw Pact Budget is also being spent on conventional weapons of all kinds. Already, in Central Europe the NATO forces are outnumbered by 2.8 to 1 in main battle tanks, by 2.7 to 1 in artillery pieces, by 2.2 to 1 in fixed-wing tactical combat aircraft, and by 1.2 to 1 in total troop levels.

It is largely to try to correct this imbalance in conventional forces that NATO itself is increasing its defence spending in real terms in the years ahead.

But within the overall total of world defence spending, there is a detectable trend for the countries of the Third World to assume a bigger share. According to the Stockholm Peace Research Institute, the share of the Third World in total defence spending in 1977-1978 had risen to about 14 per *cent, against only 6* per cent a decade earlier, with further rises in 1978-79 and in the *current* year.

This expansion is stemming from the desire of those countries to develop their armouries *of conventional weapons,* including light tactical combat aircraft, tanks and other armoured vehicles, artillery, including especially anti-tank weapons, and light battlefield guided weapons, as well as small arms and ammunition.

This trend applies as much to individual countries in South America, Central America, Africa and South-East Asia *as it* does to the Middle East, where the biggest spenders at present *are Saudi Arabia and Israel.*

Iran, following the revolution earlier this year, with the subsequent cancellation of many major military contracts with Western countries, while no longer a major arms procurer, is still interested in spares and small arms. Egypt, for political reasons stemming from its peace agreement with Israel, has been obliged to abandon its originally extensive plans to create a military industrial weapons complex dependent upon aid from other Arab countries, but is still interested in the long-term in becoming an arms producer.

That defence spending ranks high in the list of priorities for countries in the Third World is indicated by an analysis *carried out by SIPRI, which* shows that in 1977 (and there is no reason to believe the trend has changed much since then) out of 93 under-developed countries, nearly a quarter of them spent more than 25 per cent of their total gross domestic budgets on military activities; nearly a third spent more than 20 per cent in that way: and nearly 60 per cent of them spent over 10 per cent of their total domestic budgets on defence.

It is difficult to quantify precisely just how much of this cash is spent specifically on armaments as such—that is, on hardware as opposed to other items in defence budgets such as pay, food, accommodation and transport. But if the UK defence budget is any guide, it is probable that about one-third of total defence outlays go on equipment of all kinds, another third on pay for armed forces and support personnel, and the remaining third on all the other items involved in defence.

The figures will, inevitably, vary widely according to the country concerned, and the nature of its political situation, but it seems likely that at a rough estimate, some \$150bn a *year is being spent specifically* on weaponry of various kinds, and that while some part of this *is undoubtedly being spent* on nuclear weapons in the major countries of the NATO and Warsaw Pact alliances, most of it is being spent on conventional armaments.

A considerable proportion of this trade in arms stems from *four major weapons suppliers*— the U.S., Soviet Union, the UK and France. All four specialise *in virtually all kinds of conven*tional weapons, for land, sea or air warfare. The trade in nuclear armaments is very strictly limited even between members of the same alliances.

But competition in conventional weapons is fierce, and it is also significant that in recent years, many other countries in the world have tended to build up their own capabilities for weapons development and production, especially through the manufacture of weapons under licence from major arms-producing countries. While in many instances these weapons can still be classified as minor—in that they are either vehicles of various kinds, anti-tank weapons and small arms and ammunition, there is an increas*ing tendency for some of these* countries to seek more significant weapons-manufacturing *capabilities.*

Thus, India, for example, is not only buying the British Jaguar jet strike-trainer but also planning to build it under licence. Israel has for some time been building its own supersonic combat aircraft, the Kfir, as well as guided weapons; and many countries make their own vehicles, small arms and *infantry and other weapons.*

Where overseas countries do not have indigenous design and development capabilities, it is not difficult for them to establish weapons industries on the basis of licence production from one or another of the major powers. While in some countries, such as the UK, various political constraints may prevent arms deals with other countries, such as with South Africa, there are always other suppliers in the world ready to step in.

As a result of these trends, the cross-patterning of defence equipment sales and manufacturing agreements, already an almost impenetrable labyrinth, becomes more complex every year. This is not necessarily because of a desire for secrecy on arms trading between buyers and sellers, although much of that undoubtedly exists, but more because the trade itself is so substantial, and is expanding so rapidly, that it is almost impossible to keep track of it.

Many contracts, of course, are openly entered into. In the UK, where it is estimated that upwards of 1m people are given full-time employment by the defence manufacturing and ancillary supporting industries, with several hundreds of companies involved, major export contracts—for example, for military aircraft—are openly announced because they tend to be substantial and provide long-term continuity of employment for many thousands of people and make a major contribution to the country's balance of payments.

Defence sales overseas by the *UK are generally conducted* with the aid of the Ministry of Defence's own Defence Sales Organisation, which provides industry with support and advice. These sales continue to make a substantial contribution to the balance of payments, and are expected to amount to about £1.2bn this year.

Working closely with the *Defence Sales Organisation, but* separate from it, is the Government's own company, *International Military Services.* This is, in effect, the Defence Ministry's commercial arm for exports, *and it meets the need* for an organisation that can negotiate contracts with foreign Governments for equipment originating from both the Royal Ordnance Factories and from private industry.

Arrange

It also can arrange financial credit and export insurance, and contract for associated defence requirements such as maintenance, training, and infrastructure programmes. Conversely, it also meets the need of overseas governments for an organisation that carries the authority of the UK Government.

But at the same time, IMS does not compete with the private sector. Where an overseas government or agency wishes to contract directly with a private company or nationalised industry, IMS need not be involved. But defence procurement is often complex, and where overseas governments require a combination of equipment and services, IMS can act as a principal and bring together resources from both the private and public sectors, drawing on the expertise of *government agencies and the* armed forces.

IMS' turnover has risen substantially in recent years, from about £10m in 1972 to an estimated £260m in the current year. The company has always been profitable.

*Another significant organisa*tion in UK defence sales overseas is the Defence Manu*facturers' Association,* which

CONTINUED ON NEXT PAGE

Long order books from air forces

DEMAND FOR military aircraft and guided weapons is expected to remain buoyant through the '80s and beyond, as countries throughout the world continue to equip with new tactical combat aircraft and their associated weapons systems.

In the UK alone, spending on military aircraft and engines in the current financial year is expected to amount to more than £1bn, out of total spending for defence equipment of nearly £3.5bn, or about 41 per cent of the total defence budget.

Estimates prepared by British Aerospace show that during the next 15 years, up to about 1994, the overseas market for military fighter, attack and trainer aircraft, outside the U.S., the Soviet Union and Warsaw Pact countries and China, is likely to amount to as much as £40bn (in 1979 values) for over 12,500 aircraft of all kinds. Of these, about 3,600 will be small trainers and light strike aircraft, like the BAe Hawk and Dassault-Breguet/Dornier Alpha-Jet; nearly 3,000 aircraft will be in the 8,000-12,000 kilogrammes weight class, such as F-5s, A-4s and Hunters; about 4,700 aircraft will be in the 12,000 to 16,000 kilogrammes class, such as Jaguar jet-strike trainers, Harrier vertical take-off aircraft, French Mirage F-1s and U.S. F-16s; while the rest will be the bigger, air-superiority types of combat aircraft, such as the Tornado multi-role combat aircraft, the McDonnell Douglas F-15 Eagle and the Grumman F-14 Tomcat.

Of the 12,500 aircraft likely to be needed, about 2,900 are already committed, so that orders for well over 9,000 more aircraft seem likely to be placed through the 1980s and early 1990s. The biggest section of the market, representing about half in terms of value, is the Jaguar-Harrier type of aircraft, and there are high hopes for substantial continued sales of both types of aircraft through the period ahead. It should be pointed out, however, that all these estimates cover only the fighter, attack and trainer aircraft markets, and thus represent only about 70 per cent of all the military aircraft that are likely to be ordered, the rest being specialist aircraft such as transports, maritime reconnaissance, anti-submarine warfare and airborne early warning aircraft. If the U.S. market is also included—and some major competitions for new trainer and combat aircraft are in the offing there—the overall market for military aircraft of all types through the next 15 years could amount to close to 20,000 aircraft.

The UK is already in a strong position to exploit this massive market potential, both in military aircraft and asssociated guided weapons.

Exports

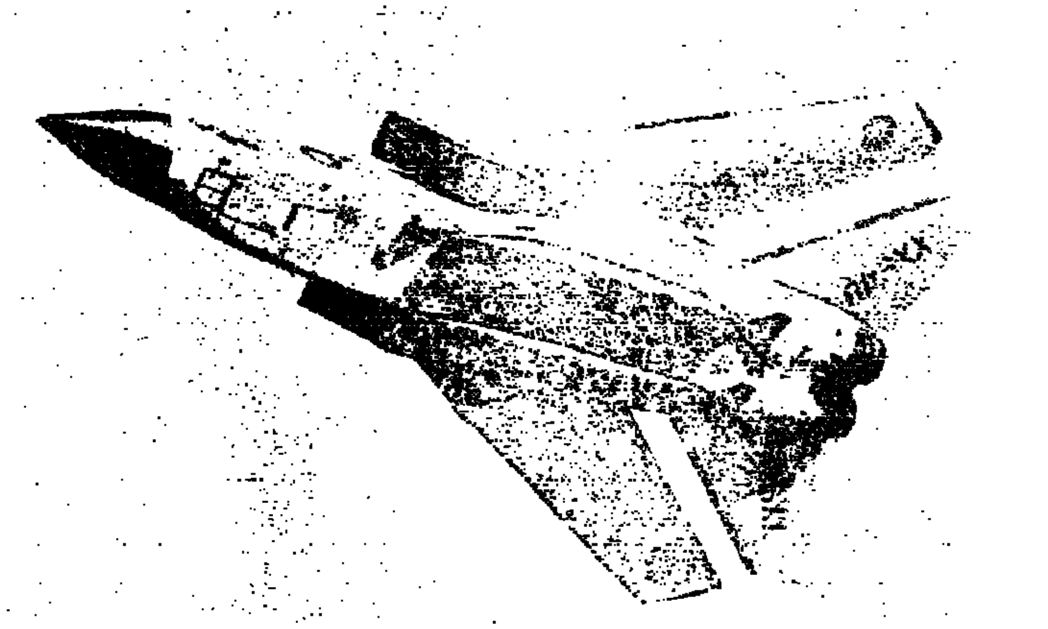
British Aerospace, the nationalised civil and military aircraft and guided weapons manufacturer, last year had total sales of over £894m, of which military aircraft accounted for no less than £284m (of which in turn export sales accounted for £135m), while sales of "defence systems," including guided weapons, amounted to £251m, of which exports accounted for over £83m.

The group's principal military aircraft programmes include the Anglo-West German-Italian Tornado Multi-Role Combat Aircraft; the Harrier and Sea Harrier vertical take-off fighters; the Hawk ground attack/trainer; Strikemaster strike/trainer; Bulldog primary trainer; the military HS-748 turbo-prop transport; the Nimrod maritime reconnaissance and airborne early warning aircraft; and the Jetstream light turbo-prop transport.

In addition, there is a substantial volume of product support, spares, overhaul, refurbishment and conversion programmes for military aircraft no longer in production, including the VC-10 aerial refuelling tanker, the Canberra, Buccaneer and Hunter strike aircraft; the Lightning supersonic fighter; Gnat trainer; Victor aerial refuelling tanker; Vulcan four-jet bomber and the Shackleton maritime reconnaissance aircraft. Substantial sub-contract work is also under way on other manufacturers' military aircraft, including the AV-8B Advanced Harrier with McDonnell Douglas of the U.S.

British Aerospace is hoping that the AV-8B will be ordered in quantity for the U.S. Navy and Marine Corps. Recently, following successful trials of prototypes of the AV-8B, McDonnell Douglas of the U.S. said that preparations had begun for full-scale development of the aircraft. Operating with "longlead" authority from the U.S. Navy, McDonnell Douglas said it was placing orders for raw materials and other equipment, and had placed contracts with British Aerospace and Rolls-Royce, which builds the Pegasus engine for the Harrier. Representatives from BAe's Kingston-Brough Division are expected to go to the U.S soon to negotiate contracts with BAe that will be worth about £32m. The first development AV-8B is expected to make its maiden flight in October, 1981, by which time it is hoped that a major production order for the aircraft will have been placed by the U.S. Navy and Marine Corps. The latter already is an extensive user of the earlier version of the Harrier, the AV-8A.

Among the major UK guided weapons programmes are continued development and production of the Rapier low-level air defence system; the Tracked Rapier low-level air defence system; Swingfire long-range anti-tank weapon; the Skyflash medium-range air-to-air missile; the Land and Sea Dart area defence system; the Seawolf shipborne point defence missile system, with a lightweight version also under development; the Sea Skua helicopter-launched anti-ship missile; the Short-Range Air-to-Air Missile (SRAAM) and the Sabre anti-armour weapon. As with military aircraft, there is a substantial volume of product support and other work associated with major missile systems now no longer in production but still in service, including the Martel, Red Top, and Firestreak air-to-air missiles; the Seaslug ship-to-air guided weapon and the Bloodhound surface-to-air weapon. The UK is also involved in license manufacture of the European Euromissile Milan medium-range anti-tank weapon and the U.S. Hughes TOW helicopter-launched anti-tank missile.



Europe's air shield for the 1980s—the Anglo-West German-Italian Tornado Multi-Role Combat Aircraft. Over 800 are to be built.

One of the major new developments in the guided weapons field in recent months has been the UK Government's decision to go ahead wth new-generation airborne anti-ship missile, designated P3T. This £300-£350m programme is being undertaken by a group of companies headed by the Dynamics Group of British Aerospace. It is aimed at giving the RAF's Tornado and Buccaneer aircraft, and the Royal Navy's Sea Harriers, the world's most advanced attack system against enemy warships. Heading the major sub-contractors is Marconi, responsible for the development and production of the active radar homing head, while other sub-contractors include Plessey, Sperry and Microturbo of France which is making the small gas-turbine engine for the weapon. British Aerospace has said that foreign sales for the P3T will be sought.

Decisions

In the UK, two major defence procurement decisions will have to be settled within the next year or two, both of which could involve international collaboration. One is whether to replace, and with what, the UK strategic nuclear deterrent, currently provided by the Polaris-missile nuclear submarine force. This force is capable of continuing in service through the 1980s, but by the early-1990s will need to be replaced not only because of age, but also because of the advancing technology of nuclear warfare.

The question is whether to continue with a submarine-based deterrent, which will require the development of new submarines and missiles to go in them, or to revert to some other form of land-based or airborne deterrent, such as a "cruise" missile—a stand-off weapon launched from an aircraft flying some hundreds of miles from the target. Whichever way the decision goes—and the studies of all the options are now in progress—it will be bound to create a major defence procurement decision costing many hundreds of millions of pounds.

For a continued seaborne deterrent, the UK will probably have to rely upon U.S. missile technology, although building its own warheads, but for an airborne "cruise" missile the UK has the undoubted ability to develop its own type of weapon system, based on the extensive experience already gained by the guided weapons industry. The danger here is that the UK may be inveigled for political reasons into accepting U.S. technology, at the risk of downgrading its own guided weapons industry, which would be more than capable of undertaking any "cruise" missile development.

The second major decision will be whether or not to develop another tactical combat aircraft, to replace the Jaguar and perhaps also the Harrier vertical take-off strike aircraft in the late 1980s, or early 1990s. An Air Staff Target, called AST-403, has already been discussed extensively in the aerospace industries of the UK and West Germany, in a bid to find a common design upon which both countries could work. If possible, the UK would like to extend such a collaborative programme to include other countries, so as to spread the burden of costs and widen the market, as has been done already with the Tornado multi-role combat aircraft. But such a programme is bound to cost many hundreds of millions of pounds—indeed, it might even come to rival the Tornado in costs and numbers of aircraft.

No decisions have yet been taken on either of these matters—which, in fact, represent only two of the continuing defence programme decisions that will have to be taken in the years ahead. But because of the developmental time-scales involved in such complex weapons systems, it seems certain that these decisions will have to be settled by, say, 1981 at the latest, if the various new weapons required are to become available by the early 1990s.

Michael Donne

Spending

CONTINUED FROM PREVIOUS PAGE

comprises more than 250 companies of all kinds engaged in this field. Formed in 1976, the association has grown rapidly and is still expanding.

While many of its members participate in major UK and overseas exhibitions of defence hardware in their own right, and conduct their own sales negotiations, the association can offer smaller companies, or those with only a marginal involvement in the defence market, an opportunity to participate in exhibitions and trade fairs at home and overseas.

The association provides an information exchange centre for members and their potential customers, enabling UK and overseas purchasers to identify companies or groups that can best meet their needs. Members of the association include manufacturers of all sizes making a wide variety of defence hardware, or providing technical services and research and development.

One of the factors that undoubtedly is worrying the NATO nations in the vast arena of defence procurement is that of weapons duplication. At one stage, NATO estimated that more than a score of different types of anti-tank weapons were either in service, under development or proposed, and there are several varieties of combat aircraft, tanks, military vehicles and even small arms in the overall NATO inventory.

Not only is this duplication wasteful of cash and resources, but is also likely to cause serious logistical problems in the event of a conventional war in Central Europe, where speed and flexibility of response will be essential.

It is to try to correct this that NATO itself has set up some time ago the Eurogroup as a means of achieving closer collaboration across a wide field of matters of common interest, and particularly equipment design, development and production.

A number of major weapons systems now under production in Western Europe are the result of international collaboration, perhaps the biggest being the Anglo-West German-Italian Tornado multi-role combat aircraft. But at the same time there are many in the NATO alliance who believe that collaboration with the U.S.—the "two-way street"—needs to go much further than it has done so far, to counter-balance the preponderance of U.S. arms sales, and especially combat aircraft, to Western Europe.

This trend towards international collaboration is also being dictated by the rising cost and complexity of many modern military weapons systems, and especially missile systems and advanced supersonic military aircraft. The Anglo-West German-Italian Tornado military aircraft programme, for example, providing for 809 production aircraft for the three air forces involved, is expected eventually to cost more than £8bn by completition in the late 1980s, a sum that no single country, even the UK, could contemplate by itself.

International collaboration not only spreads the burden of costs, but also increases the overall market, providing long production runs which in turn help to reduce production costs. Other major examples of international collaboration in weapons systems production in recent years include the Anglo-French helicopter package which produced the Gazelle light helicopter, the Puma tactical transport helicopter and the Lynx multi-role helicopter.

Efforts to promote a new international helicopter collaborative venture are now under way between Britain and Italy, and hopefully also other West European countries, on the WG-34 military aircraft. Collaboration in Europe has also extended to military vehicles (between the UK and Belgium), and in the provision of power-units for warships (between the UK and Holland, for example).

DEFENCE EQUIPMENT INDUSTRIES III

Battlefields in space

THE MAIN use of space until now and for the foreseeable future is the military one. The only proposal which could change the balance significantly is the solar power satellite, the scheme for tapping solar energy round-the-clock by way of a geostationary earth satellite and beaming it back to earth. Unfortunately, for those seeking new sources of energy to supplement fossil fuels, the economics of the solar power satellite appear to be very discouraging at present.

Last year, of another 155 satellites launched from the earth, 112 were paid for out of defence budgets: 91 by the USSR, 19 by the U.S., 1 by China, and 1 by the U.S. for NATO. According to SIPRI, the Stockholm International Peace Research Institute, three out of four of all the 2,000-odd satellites launched since Sputnik have been "military oriented."

The importance today of a potential battlefield high in the sky, which has been accessible for little more than two decades, is easily under-estimated from the ground. But its existence was brought home dramatically to people early last year when a Russian military satellite bearing a miniature nuclear reactor to provide it with bursts of high power inadvertently re-entered the atmosphere. Canada, the main recipient of the radioactive debris scattered by Cosmos 954, is still trying to get reparations from the USSR for the cost of clearing up the mess.

Like most military satellites, Cosmos 954 was designed for a particular task of surveillance; in this case, observation of U.S. naval activities by means of a powerful radar requiring power levels obtainable only from a nuclear reactor in space. Ocean surveillance, as a space activity, dates from the mid-1960s. The main objective is to give navies a virtually real-time, synoptic view of the ocean, by relaying data captured by the watching satellite via a communications satellite back to a control centre on land.

The U.S. Navy's first ocean-surveillance satellite was launched little more than three years ago. Code-named White Cloud, its purpose is to monitor movements and transmissions of surface vessels, for which it carries three "sub-satellites" which it can place into orbit. The four satellites, all in near-circular earth orbit, can together keep a large portion of the ocean under constant observation, and the direction in which vessels are moving can be ascertained. The mother satellite carries such sensors as passive infra-red and microwave radiometers, and radio-frequency detectors to pick up radar and radio signals from ships. Its siblings are understood also to carry infra-red and microwave sensors.

The White Cloud satellites can detect transmissions at a range of 3,000 km. They are therefore positioned about 3,000 miles apart to afford continuous monitoring of naval vessels. A more advanced U.S. development known as Clipper Bow, scheduled to be introduced in 1983, is expected to refine the surveillance to a point where any enemy vessel can be identified.

Surveillance

SIPRI reports that the USSR probably began its ocean-surveillance programme a little later than the U.S.* It employs pairs of satellites in low orbits, 9 degrees apart, to observe the direction and speed of vessels. It has developed a method of surveillance based on high-power radars, for which it requires a nuclear reactor. The first pair of Cosmos ocean-surveillance satellites was launched in 1974. Their powerpacks use highly enriched uranium to deliver a relatively brief burst of power. Once this power has been expended, the satellite is replaced and "parked" in an orbit of much greater altitude where it is expected to remain safely until the radioactive fission products of the nuclear reaction have decayed to safe levels. With Cosmos 954 the procedure went awry and the satellite tumbled back to earth.

Submerged submarines pose additional problems for satellite sensors because of the cover provided by the ocean itself—a "noisy" background, electronically speaking, for a host of different reasons, both natural and man-made. Many kinds of satellite contribute importantly to global ocean-surveillance, including the latest TIROS weather satellites developed by NASA, the U.S. National Aeronautics and Space Administration. The activities planned for NASA's Space Shuttle and its Spacelab orbiting laboratory will certainly extend their capability for unravelling the complexities of ocean noise.

In addition, the U.S. has developed SEASAT, a NASA project for ocean sensing—sea state (wave height), wind speed and direction, wave direction and ocean temperature. SEASAT is unhampered by cloud and works equally well by night or day because it uses microwave sensors. The project is partly financed and controlled by the U.S. Department of Defence. SEASAT can also tune into signals from the military NAVSTAR satellites, so ascertaining its own position to within 10 metres, while its radar can resolve a terrestrial target as small as 25 metres across. It is believed that SEASAT satellites may be able to detect the hydrodynamic signature left by a submarine when the conical wake of undersea turbulence it inevitably trails finally breaks the surface.

Nuclear explosions in space are banned under the Partial Nuclear Test Ban Treaty of 1963. Under the Outer Space Treaty of 1967, the U.S. and USSR agreed that "nuclear weapons and/or any other kinds of weapons of mass destruction in earth orbit" should be forbidden. They also banned military activities on the moon or other celestial bodies. But the two treaties still leave plenty of scope for military activities in space, and especially for anti-satellite weapons, such as ray and beam weapons which might be fired with extremely high velocity and accuracy, unhindered by the vagaries of the earth's atmosphere.

To serve this end, both the U.S. and the USSR have been working on techniques for intercepting satellites in space, interrogating them, jamming their transmissions, and if necessary destroying them or even plucking them out of orbit for closer inspection. The Russians are known to have conducted at least two series of trials with potential "killer" satellites, one from 1968-71, and one which began in 1976 and may still be continuing.

These tests cover four different modes of intercepting one satellite with another. They are perigree matching, in which the interceptor makes a fast swoop past its target at the lowes point in the target's orbit: co-orbiting, in which the interceptor approaches more gradually in a circular orbit similar to that of its target; apogee matching, in which the interceptor by-passes its target at the highest point of its own first orbit: and the most recent "pop up" mode, tried in 1977, in which the interceptor enters an orbit much lower than that of its target, and is accelerated to target altitude.

These tests have certainly worried U.S. defence officials, even though their scope so far leaves most U.S. military satellites well beyond reach. The U.S. is understood to be working on two kinds of killer satellite. One takes the form of miniature space vehicles released from a high-flying aircraft, designed to collide with and destroy a satellite. The other is a satellite carrying high explosives which can be manoeuvred close to an enemy satellite and blown up. Both kinds will home on their targets by means of long-range infra-red or radar sensors. The Americans are also developing a target satellite which can be used to test the performance of their anti-satellite systems.

But the Russians have also shown signs of being distinctly perturbed by the development of the Space Shuttle, NASA's biggest project at present, and one in which the Department of Defense has made a substantial investment. The Space Shuttle will be able to carry aloft complete satellites and manoeuvre them into orbit, using a crew of seven to make any on-the-spot assembly or adjustment required. More significantly still, it will be able to recover satellites from orbit and bring them back to earth for repair—or for closer examination.

According to SIPRI, one of the projects planned for the Space Shuttle is to put into orbit a new kind of military surveillance satellite equipped with very sensitive heat sensors, designed to spot from far above the cruise missiles or low-flying aircraft which ground radar may fail to detect. Another NASA project envisages the assembly in space of a giant telescope—a project which will require no fewer than six trips by the Shuttle, with its 29-tonne payload. Again, the Shuttle should afford a versatile "gun platform" for trying out the new laser and beam weapons.

The first flight of the Space Shuttle, which President Carter originally requested for this month, has been delayed by technical problems, until some time next year. But even if the USSR is seriously developing a counterpart to the Shuttle, the signs are that the Americans could have a lead of some years in this technology.

* *SIPRI Yearbook 1979. Taylor and Francis Limited, 10-14, Macklin Street, London WC2B 5NF, pp 698, £21.50.*

David Fishlock
Science Editor

The West's defence strategy

WHATEVER THE outcome of current debates on arms control, defence spending by the Western powers seems likely to rise substantially in the next few years. The reason is the steady military build-up by the Soviet Union and the West's decision, originally taken at the NATO summit meeting in London in 1977, that this will have to be countered if the balance of power is not to tilt too far in Russia's favour.

The NATO members have already agreed to increase their defence spending by 3 per cent a year in real terms over the next five years. There is some argument about how many of them are pulling their weight and whether the target can be met at once. In particular there is an argument in Britain between the Ministry of Defence and the Treasury about what "3 per cent in real terms" means. In defence circles it means volume terms, but to the Treasury it means simply 3 per cent above the general level of inflation. The trouble is that defence costs tend to rise much more sharply than general costs. But either way the trend seems to be upwards and it has been reinforced by the coming to power of a Conservative Government determined to do more about defence even while containing public expenditure overall.

There has been a similar development in the U.S. The Senate vote on the ratification of SALT 2 will not take place until towards the end of this year and the result is still in doubt. But what is significant is that even those who support the treaty—from President Carter downwards—admit that defence spending will go up regardless. The only question is by how much.

Mr. Carter recently submitted a defence budget to Congress that would raise military spending next year by 3 per cent in real terms to $130.6bn. He may well have to ask for more as the price of securing Senate ratification of the SALT treaty. A number of Senators have already suggested that the real increase should be closer to 5 per cent. Among them are not only Senator Henry Jackson, who is readily identified as a hawk in defence matters, but also Senator Sam Nunn, who is neither hawk nor dove but has a great deal of influence because of his military expertise. Dr. Henry Kissinger, the former Secretary of State who used sometimes to be accused of being too indulgent to the Russians, has been moving in the same direction, even to the point of urging general Western rearmament.

It is also significant that Mr. Carter himself has approved a major new strategic system for deployment in the late 1980s. That is the MX missile which, unlike the present generation of land-based intercontinental ballistic missiles (ICBMs), will be mobile and [illegible]ss vulnerable to Sovie[illegible]ive attack. It is safe to say that without approval of the MX programme the chances of SALT ratification by the Senate would have been minimal. The system is expected to cost $33bn.

Other improvements to American strategic forces will continue whatever happens to SALT. Indeed in the present climate it is by no means inconceivable that the Administration will be obliged to revive the plans for the B-1 bomber. They were abandoned last year in favour of modernisation of the ageing B-52s which first entered service in the 1950s. Such is the state of opinion today that that decision is widely regarded as a mistake, as again was the President's refusal last year to authorise the development of the enhanced radiation weapon, generally known as the neutron bomb.

It was the confusion surrounding the neutron decision that persuaded NATO that it ought to behave in a more organised fashion in future. The lesson has been taken to heart in the preparations for the modernisation of theatre nuclear weapons in Europe. It now seems likely, though it is impossible to be certain in these matters, that the Alliance will approve a comprehensive programme to this end at its Ministerial meetings in December.

The programme will consist of the deployment of some 600 new American theatre nuclear weapons (the precise figure is said to be 572) spread across the territory of as many European members of the Alliance as possible. The aim will be to counter the new Soviet theatre nuclear systems such as the SS-20 missile and the Backfire bomber which have led to fears, especially in West Germany, that the balance of nuclear power in Europe is shifting dangerously in favour of the Russians. Pershing 2 ballistic missiles with a range of over 1,000 miles are likely tot be chosen for this purpose, as well as ground-launched cruise missiles (GLCMs) whose range will be even greater.

A NATO decision to deploy such systems will be accompanied by a new offer to the Soviet Union to negotiate on arms control, this time on theatre nuclear weapons. The forum could be the talks on mutually balanced force reductions (MBFR) in Vienna where little progress has been made despite five years of discussions. More likely it would be SALT 3 (assuming SALT 2 is ratified) or it could be something entirely new.

It should be said, however, that the chances of such negotiations being successful are generally regarded as small.

The view in Western defence circles is that deployment of the new systems will go ahead, probably around the end of 1983. The Americans will bear the bulk of the costs, which will again run into bililons of dollars.

The introduction of GLCMs has some bearing on SALT 2. The protocol to that treaty forbids the deployment of both ground-launched and sea-launched cruise missiles before the end of 1981, but it does not forbid their development. It seems likely that this will continue apace, and such is the present climate of opinion that it is hard to imagine that the protocol will be renewed when it expires.

Status

There may be some special problems for Britain in this context. The American proposals for theatre modernisation are for the deployment of purely American systems, with the GLCMs being based in the UK. It may well be that the British Government will wish to build its own, or at least to do so under licence in order to emphasise its status as a nuclear power. The matter is still under consideration, but the Government is clearly tempted by the idea of a British cruise missile programme if it can find the money.

The other major British decision on nuclear forces concerns the successor to Polaris, the main element in the country's strategic deterrent. A decision does not appear to be imminent, but under Mrs. Thatcher's Government the question is how and when rather than whether. A new generation of ballistic missile-carrying submarines has emerged as the clear favourite. Although there has been some talk of a European nuclear force, it is not generally regarded as realistic. Co-operation with the Americans on the Polaris successor will be essential and is expected to be forthcoming.

In general therefore the prospect is one of the steady modernisation of nuclear forces, both at the strategic and the tactical level. The third leg of the NATO defence triad consists of conventional forces. Even these are being modernised as part of the Alliance's long-term defence programme. There are still those who maintain that NATO is doing too little too late, but it would be hard to deny that there has been a change in the trend. The cause has been the growing awareness of Soviet military power and of the need to counter it.

Malcolm Rutherford
Political Editor

Warships boost for UK yards

The building of warships in Britain has in the past year assumed an importance, in terms of industrial activity, unparalleled since the early days of this century.

British yards had orders for 44 warships valued at £1.736bn at the end of June, 30 per cent of them bound for export. At the same time, the total order book for merchant ships, once the bread and butter of British yards, stood at 88 ships worth £632m. The figures reflect the new emphasis on naval work which has become inevitable during the six years of recession in world shipping and the consequent downturn in demand for merchant ships.

The move away from merchant shipbuilding has largely been a forced one for corporations like British Shipbuilders, the State-owned body responsible for the major part of naval and merchant shipbuilding work in Britain. Merchant ship orders have simply not been available in the volume necessary to maintain yard capacity working at a viable level. The corporation has attempted to encourage the British Ministry of Defence to bring forward orders for naval vessels to help fill the gap caused by the slump in the non-military sphere.

But even without an accelerated building programme, British warship yards were to be treated to a generous ordering programme this year, according to the 1979 Defence White Paper, which said that out of total defence spending on all types of equipment in 1979-1980 of £3.493bn, £757m would be spent on ships, ship equipment, stores and weapons. The naval shipbuilding and equipment total included £261m on fighting ships, £51m for support, Royal Fleet Auxiliary and other vessels, and £280m on weapons systems, missiles and torpedoes.

Warship building is carried out at Yarrow (Shipbuilders) *on the Clyde, the Vickers* Shipbuilding Group, Barrow, Vosper Thorneycroft (UK), Southampton, Swan Hunter Shipbuilders, Wallsend, Cammell Lairds at Birkenhead, and Scotts (Shipbuilding), Greenock.

The last two companies also build large merchant vessels, but the emphasis from this year on will be on naval work, a development which stems from British Shipbuilders' plans for rationalising the industry. The plans mean cutting out merchant shipbuilding capacity which is now surplus to current and foreseen requirements.

Last year only 22 merchant vessels valued at £150m and totalling 154,602 compensated gross registered tonnes (cgrt a —measure of the work content of a vessel) were ordered from the corporation's yards. These orders helped to lift the total merchant order book to 837,862 cgrt, at the end of the last financial year in March — but still a far cry from the 2.5m cgrt on the order books in the first quarter of 1975.

In contrast the naval work in hand and on order at the end of March came to a total of 41 ships. No figure was published for the *tonnage involved, although* the total compared with 65 vessels on the orderbook at the end of March four years ago.

Specialist

British Shipbuilders said in its annual report that the naval shipbuilding order book has remained *"fairly constant* for some years." In fact figures show that there has been a steady decrease in the number of warship orders going to Britain's mixed merchant and naval yards, and a growing emphasis on the specialist naval yards. These yards had 29 naval vessels on order four years ago last March, compared with 12 at the end of the current financial year.

On the other hand, the order books in the specialist naval yards, which had 36 naval ships on order four years ago, have stabilised at around 28 or 29 vessels.

The corporation's plans call for a cut of 10,000 in the number of employees in merchant shipbuilding over the next 18 months.. Up to 6,000 of these job losses may be accounted for by transfers to offshore engineering work and to the specialist naval yards, which now employ 19,300 men.

The changes are designed to leave the merchant ship sector with between 18,000 and 19,000 jobs by 1981. The transfer of jobs to the specialist naval yards will ensure that throughout the early 1980s Britain's shipbuilding will be dominated by naval work.

However, against these structural changes in the nature of the industry in Britain there is a rising tide of change in warship technology and in the military strategy which determines design requirements.

The development of the through-deck cruiser in Britain as an alternative to the aircraft carrier has moved ahead with the sea trials of HMS Invincible, built by Vickers at Barrow-in-Furness. The cruiser is designed for anti-submarine warfare but will carry the Sea Harrier short and vertical take-off aircraft.

Two other through-deck cruisers have also been ordered for the Royal Navy, HMS Illustrious and HMS Ark Royal, both of 16,000 standard displacement tonnes. HMS Illustrious was launched from Swan Hunter's yard on the Tyne last December at the same time the Ministry of Defence *ordered the £200m* HMS Ark Royal. The three vessels will all have been fitted with the British "ski jump" upward sloping ramp for aiding the take-off of the Harrier.

Other technological developments in warship construction include the use of glass reinforced plastic for the Hunt class of mine *countermeasures* vessels. Three of these vessels are under construction.

Britain has also developed a new class of frigate, the Type 24, to be built at Yarrow's shipyard on the Clyde. The first of the class is to be built without a formal order from any world navy. The keel is expected to be *laid soon.*

Details of the vessels were given at the recent Royal Navy Equipment Exhibition at Portsmouth, where plans were unveiled for the first new conventional diesel-electric submarine —the Type 2400—to be designed in Britain for a quarter of a century. Up to 12 of the new submarines may be ordered for the Royal Navy, to replace the Oberon class SSK.

However, another advance in submarine technology — the development of fuel-cell power —may well be by-passed by Britain. Fuel-cells can offer high efficiency, silence, minimum manpower demands, complete absence of heated exhaust—which in other submarines can disclose their presence to enemy warships — and simple maintenance. Fuel-cells were invented in Britain and the rapidly rising cost and complexity of nuclear power as the means of submarine propulsion has forced world navies to study possible alternatives.

West Germany may well become the first country to produce a fuel-cell powered submarine for full operational duties. The craft may be able to travel at 22 knots for weeks at a time.

Fuel-cells, the application of low-cost microprocessor technology and more efficient hull shapes may result in smaller submarines and other warships. Manning levels could be cut and more ships could be ordered for the same outlay.

But one of the most unusual *developments is the 50,000-ton* nuclear-powered aircraft carrier now under construction for the Soviet Navy, at a time when forces in the West are re-assessing the role and importance of similar large craft.

The Soviets already have three Kiev class anti-submarine aircraft carriers in service, carrying vertical take-off fighters. The vessels have been compared with the British Invincible class through-deck cruisers although the Soviet vessels displace 37,000 tonnes, making them over twice the size of the British vessels.

The U.S. *has not abandoned* the large carriers, however, and the U.S. House of Appropriation defence subcommittee agreed that funds should be provided for a new nuclear powered carrier next year. This is despite objections from the Carter Administration.

On a much smaller scale a 260-tonne naval craft capable of carrying two helicopters has been developed by the Helicat Company, a new independent British company. The craft would be powered by twin Rolls-Royce Tyne gas turbines and has been designed as a low cost *option for overseas nations. The* 46-m catamaran hull would be made of glass reinforced plastics and the complete craft could cost as little as £10m.

Lynton McLain

Artist's impression of the helicopter-carrying catamaran developed by the Helicat Company

Electronics to the fore

THE UNITED Kingdom, traditionally strong in the general defence field, is particularly so in the part of it taken up by defence electronics. Worldwide the industry is booming, largely because the electronics incorporated in military systems and vehicles of every type are growing very rapidly, and also because defence spending in general continues at a high level.

In the UK a number of companies—Decca, Ferranti, Marconi (a division of the General Electric Company), Plessey and Racal—are major contenders for both domestic defence requirements and the world market, while companies like Cable and Wireless and Inter*national Aeradio (IAL) offer* increasingly wide consultancy and contractual expertise.

As a general overview, it may be said that military electronics often blaze an experimental trail which is subsequently followed by civil and commercial applications. Probably the most famous instance are the developments in the U.S. military and space programmes in the field of integrated circuits in the fifties and sixties which laid the foundations of the U.S. semiconductor industry, still the world's leader. That in turn has fuelled the so called "revolution" in microcircuit technology, which now pervades most sectors of industrial, commercial and social life.

A recent report by stockbrokers Laurie, Millbanks highlights the importance of "electronics warfare" for the UK economy: "Electronics warfare is an outstanding growth market. The UK manufacturers are limited by Government spending and limitations on export markets. However, one important aspect should be borne in mind, and that is that most existing ships and aircraft need to be fitted out retrospectively, and this can create a significant business."

Significant indeed—since the electronics retooling of, for example, a naval ship can lead *to* contracts of £1m or more, with more modest but welcome deals on fighter aircraft and army vehicles and control centres.

Decca, one of whose two *divisions — capital goods —* specialises considerably in military electronics, is currently weak. Earlier this month it reported a net loss of over £5m after a net profit in the previous year of around £4m. Much of that weakness appears to stem from the consumer goods side of the business, where its television division is loss-making, and where its record company shares in the current downturn in the record market (especially popular music).

On the capital side, the military hardware—mainly land, ship and airborne radar—has also caused some problems, though it is regarded as the group's major strength. It has introduced the Cutlass series of electronic support measures, and jamming systems known as electronic counter-measures. These are for use where signalling is intense, and have the capability to decode some 2,000 hostile radars. Decca has said that profits on this side of the business, where some £80m worth of orders are on hand, will come through in the current year and next—though it is not clear yet if they will succeed in lifting the company's performance sufficiently to make it strong once more.

In contrast to Decca, Ferranti's problems seem in many cases to be of the past (though it has recently had to leave the power transformers business after years of unprofitability there). It is still 50 per cent owned by the National Enterprise Board, which rescued it *in 1975. It is commonly sup*posed that it will be wholly or very largely returned to the private market soon.

Systems

Its defence commitments, based heavily on the company's Scottish Group, are mainly in airborne radar, inertial navigation and direction systems (selected for the Tornado, the Nimrod Mark 2, the Sea Harrier and the U.S. Navy A18 strike fighters) and laser technology for range-finding and target-marking systems, both in the air and on the ground. In radar, the *group has manufac*tured the bulk of attack radar systems for UK aircraft over the past 15 years, while the Seaspray version, in use with the Royal Navy, is also used by the Dutch, Danish and Brazilian navies.

Marconi, as a division of GEC, is exceptionally well placed for cash reserves and for group strength. GEC recently announced another year of record sales and turnover, while it is known that the company means to continue a policy of large-scale acquisition, especially in the U.S.

Marconi has three divisions concerned with military work—Marconi-Elliott Avionic Systems, Marconi Radar Systems and Marconi Space and Defence. Existing order books are fairly full and the company's recent review points to continued *strong growth in this* area. Marconi has introduced a 3-D radar system, MARTELLO, completely backed by its own funds; has undertaken major work on the navy's two weapon systems, Sea Dart and Seawolf; completed a large radar station in the Shetlands for NATO; and continued development on the Sting Ray torpedo and the SINCGARS communication contract for the Army.

Plessey may be described in shorthand to stand somewhere between Decca and Ferranti in the mind of City analysts. It is recognised as having problems, but, in recent months, *has shown* an upturn and looks in better shape than for years. Its major business remains telecommunications, where it has made major rationalisations. Like GEC and Standard Telephone and Cable, it is heavily committed to System X; its Garrard record turntable division is making lower losses than it was.

In defence Plessey Electronics Systems and Plessey Marine are both seen as the company's most profitable divisions. It has a development contract with the Army valued at £100m for Project Ptarmigan, a strategic *battlefield communication* system, and the *production* phase is thought near to starting. The AWS-5 ship radar has been bought by Denmark and West Germany, while a new tactical data control and display system, code-named Project Wavell, recently successfully completed its first phase.

Finally, Racal seems to be retaining its place as the stock market's darling. The Laurie Millbank report says of it that "more than any other major UK company Racal has exploited its product range in the market place . . . it has demonstrated on several occa*sions its ability to make timely* acquisitions and enter markets with major growth potential."

Tactical and strategic radio communications make up nearly half of the group's output, while data communications accounts for a further 30 per cent. Much of the company's growth may be attributed to the tactical division, which still accounts for around 35 per cent of its turnover.

John Lloyd

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Motors and Cycles

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

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PROPERTY

PROPERTY—Continued

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

INVESTMENT TRUSTS—Cont.

Finance, Land, etc.

FINANCE, LAND—Continued

OILS

OVERSEAS TRADERS

RUBBERS AND SISALS

TEAS

India and Bangladesh

Sri Lanka

Africa

MINES

CENTRAL RAND

EASTERN RAND

FAR WEST RAND

O.F.S.

FINANCE

DIAMOND AND PLATINUM

CENTRAL AFRICAN

MINES—Continued

AUSTRALIAN

Dividends Paid		Stock	Price	Last xd	Div Net	Cvr	Yld Gr's
—		Acmex	[illegible]	—	—	—	—
—		ACM 20c	[illegible]	—	—	—	—
—		Bond Corp.	[illegible]	—	—	—	—
Nov.	Apr.	Bougainville 50 Toea	[illegible]	[illegible]	[illegible]	1.0	5.7
—		EH South 50c	[illegible]	[illegible]	—	—	—
—		Central Pacific	[illegible]	—	—	—	—
Oct.	May	Conzinc Riotinto 50c.	[illegible]	[illegible]	NQ10c	2.0	2.4
—		Cultus Pacific N.L.	[illegible]	—	—	—	—
—		Eagle Corp. 10c	[illegible]	—	—	—	—
—		Endeavour 20c	[illegible]	—	—	—	—
—		G.M. Kalgoorlie $1.	126	[illegible]	[illegible]	[illegible]	1.3
September		Hampton Areas 5p.	255	13.3	[illegible]	2.0	2.0

TINS

COPPER

MISCELLANEOUS

GOLDS EX-$ PREMIUM

London quotations for selected South African gold mining shares in U.S. currency excluding the investment dollar premium. These prices are available only to non-UK residents.

Div Paid		Stock	Price	Last xd / Div Net	Cvr	Yld Gr's
Feb.	Aug.	Buffels R1	[illegible]	[illegible]	[illegible]	12.0
Aug.	Feb.	East Drie R1	$15	[illegible]	[illegible]	[illegible]
Aug.	Feb.	East Rand Prp R1	$13	[illegible]	—	[illegible]
June	Dec.	F.S. Geduld 50c	[illegible]	[illegible]	2.5	11.5
June	Dec.	Pres. Brand 50c	[illegible]	[illegible]	[illegible]	8.0
May	Nov.	St. Helena R1	[illegible]	[illegible]	[illegible]	7.2
Aug.	Feb.	Stilfontein 50c	[illegible]	[illegible]	[illegible]	9.6
Aug.	Feb.	Vaal Reefs 50c	[illegible]	[illegible]	[illegible]	9.6
Feb.	Aug.	West Drie R1	[illegible]	[illegible]	[illegible]	[illegible]
June	Dec.	West Hldgs. 50c	[illegible]	[illegible]	[illegible]	[illegible]
Feb.	Aug.	Western Deep R2	$19[illegible]	[illegible]	[illegible]	9.0

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on the basis of net distribution; bracketed figures indicate 10 per cent. or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent. and allow for value of declared distributions and rights. Securities with denominations other than sterling or EEC currencies are quoted inclusive of the investment dollar premium.

- Sterling denominated securities which include investment dollar premium.
- "Tap" Stock.
- Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- Interim since increased or resumed.
- Interim since reduced, passed or deferred.
- Tax-free to non-residents on application.
- Figures or report awaited.
- Unlisted security.
- Price at time of suspension.
- Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
- Merger bid or reorganisation in progress.
- Not comparable.
- Same interim: reduced final and/or reduced earnings indicated.
- Forecast dividend; cover on earnings updated by latest interim statement.
- Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- Excluding a final dividend declaration.
- Regional price.
- No par value.

a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to [illegible]

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xc ex capital distribution.

"Recent Issues" and "Rights" Page 13

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £500 per annum for each security

REGIONAL MARKETS

The following is a selection of London quotations of shares previously listed only in regional markets. Prices of Irish issues, most of which are not officially listed in London, are as quoted on the Irish exchange.

IRISH

OPTIONS

3-month Call Rates

FINANCIAL TIMES

Monday September 24 1979

Aid Bill would mean 'drastic cut' in World Bank activity

BY OUR FOREIGN STAFF

WORLD BANK operations could be drastically cut if the U.S. Congress passes the 1980 U.S. Foreign Aid Bill with the restrictions on aid use imposed by the House of Representatives, according to Bank officials.

The issue is likely to come to a head in early October when the Bill goes to the Senate for consideration at the same time as the World Bank's annual meeting in Belgrade.

The restrictions, which Mr. Robert McNamara, the World Bank President, has called unacceptable, and which the Carter Administration has opposed, are that multinational aid agencies cannot use U.S. funds to lend to six countries: Vietnam, Kampuchea, Laos, the Central African Empire, Angola and Cuba.

The World Bank says it is not in a position to accept funds with conditions of this kind attached.

If the Senate follows the House's action, one immediate effect, according to Mr. Ernest Stern, Bank vice-president for operations, would be an end this autumn to new lending by the International Development Association (IDA), the World Bank's soft loan affiliate.

The IDA is the biggest single source of concessionary aid to the Third World. Its loans are interest-free and repayable over 50 years. IDA credits totalled $3bn in 1978-79, according to the World Bank's annual report, published today.

All contributions by richer governments to IDA are keyed to those of the U.S., the largest donor. So if the U.S. money is not forthcoming, all other Government contributions will be withdrawn, say Bank officials.

The IDA's problems are compounded by the fact that the U.S. is already deep in arrears on its IDA payments for the past five years and negotiations to replenish IDA funds between 1980 and 1983 are due to start shortly.

A doubling of the World Bank's general capital base from $40bn to $80bn, has also been stalled in Congress, but this is not a source of immediate concern for the World Bank.

Only 7½ per cent of the capital increase will be put into Bank coffers immediately, and the U.S. share of this totals only $600m. Subscriptions will not be paid in full until 1986, so the current mood on Capitol Hill may not be indicative of the mood then.

Conservative opponents of U.S. aid and the World Bank have succeeded for the past two years in getting the House of Representatives to write in restrictions on which countries should get U.S. aid. On both occasions, the Carter Administration with help from the Senate, have managed to work out compromises, enabling the flow of funds to the Bank to continue.

Mr. Stern described past disputes between the Bank and the House of Representatives as "well-choreographed ballet—but the floorboards are getting more rotten." Bank officials are more pessimistic this year about the outcome on Capitol Hill, because the expulsion of the "boat people" has roused many Congressmen's anger, and because the composition of the U.S. Senate is more conservative after last November's elections.

Assurances from the World Bank that no new loans to Vietnam are imminent (because of economic chaos there) have so far failed to stop Congress writing in specific restrictions.

The World Bank's annual report says that the developing countries' success in weathering the economic storms of the 1970s has now been thrown into question by economic uncertainties in the industrialised countries — their major export market.

While by the end of last year the current account position of oil-importing developing countries was no worse than in 1973, the Bank expected their overall payments deficit this year to be pushed up by the oil price rises to a total of $42bn, an increase of $10bn.

India and the East Asian countries are singled out for their strong development gains in the past year, but the Bank comments that overall for the Third World there is "no cause for rejoicing."

Methven returns to tax treaty row

BY MICHAEL LAFFERTY

SIR JOHN METHVEN, the CBI director general, returns from holiday today to find himself the centre of a storm over the CBI's handling of British industry's opposition to the UK/U.S. double tax treaty.

Several major companies are saying that a letter he wrote last month to Sir Geoffrey Howe, Chancellor of the Exchequer, has seriously damaged the chances of having the contentious unitary taxation system banned for UK companies operating in the U.S.

Unitary taxation is the system whereby a subsidiary company in the U.S. is taxed according to its worldwide income and not on the basis of its local results. It is particularly associated with the state of California, and was to have been banned by the new UK/U.S. treaty. However, the move failed when the U.S. Senate failed to ratify the pact by the necessary majority. The revised treaty, without any unitary tax provision, has now been approved by the U.S. authorities and will shortly come before the Commons again.

In spite of the Government's decision to give in to the U.S. on the unitary tax issue, a group of 50 leading companies has continued to campaign on the matter. The group includes such companies as BAT Industries, Bowater, BOC, Cadbury-Schweppes, Chloride, Davy International, GKN, Smiths Industries and Thorn, and is also closely connected with the Hundred Group of leading industrial chartered accountants.

The companies have felt for some time that the UK could bring pressure to bear on the U.S. authorities by refusing to ratify the revised treaty. They were furious, therefore, to discover last week that Sir John Methven had advised the Chancellor of the Exchequer that "...on balance, it would seem preferable for the treaty to be ratified when Parliament reassembles. ."

Mr. John Symons, deputy chairman and finance director of BAT, said yesterday he was horrified by Sir John's letter. "To me his action is incomprehensible." Mr. Symons, said he would be seeking a full explanation from the CBI.

Mr. Michael Grylls, vice-chairman of the Commons industry committee, said it would have been more sensible for the CBI to take a neutral stance.

Mr. Peter Welsh, finance director of the international chemical group, Foseco Minsip, said he doubted whether the CBI letter had been approved by the confederation's tax committee.

The British Government view seems to be that the unitary tax issue has been lost, so that there is no further point in persuing the issue.

This is challenged by members of the companies' lobbying group.

The UK companies believe there is a fair chance that Bills dealing with the unitary tax problem in general, which were recently introduced in both the Senate and Congress, could be passed if U.S. industry exerts sufficient pressure.

This it may be forced to do if the treaty is delayed by the UK.

Union moderates shun Labour 'squabbles'

BY CHRISTIAN TYLER, LABOUR EDITOR

LEADING TRADE UNION moderates said yesterday they had no intention of mounting a last-minute campaign for Mr. Callaghan, who is fighting to defeat Left-wing reforms of the Labour Party constitution.

Even Mr. Frank Chapple of the Electricians, who has always liked a good fight with the Left, said last night he wanted nothing to do with moves by one or two union leaders to lobby other unions. "I prefer to stay out of Labour Party squabbles," he said.

A meeting of Right-wing MPs and union leaders has been planned for tonight, but reports that Mr. Callaghan may meet Right-wing union leaders were not confirmed by any of those said to be participating.

The attempt to step up the fight for Mr. Callaghan appears to be confined to Mr. Bill Sirs, of the Steelworkers, and Mr. Terry Duffy, of the Engineers, who said yesterday: "We will work like the devil to ensure our votes are cast against the reforms."

The engineers delegation to the party conference, according to both factions' estimates, is split 16—18 or 17—17. So no one is predicting how this crucial block vote will be cast, ahead of the delegation's meeting next Sunday.

Some union leaders, like Mr. David Basnett of the General and Municipal Workers' Union, are determined to keep out of the political fray. Mr. Basnett heads a committee of nine general secretaries, Trade Unions for a Labour Victory; but TUFLV, he made clear, wanted nothing to do with the backstairs armtwisting going on.

Many believe also that Mr. Callaghan has misplayed his cards. "I wouldn't say it's badly lost for Jim Callaghan, but he has handled it badly with this bleeding heart stuff," one said last night.

Some Right-wing Labour MPs also feel Mr. Callaghan has left it too late to come up with positive compromise proposals of his own. It is now most unlikely that any such compromise can be cobbled together before next week's party conference.

The Sirs-Duffy lobby aim is to persuade unions that they have been "manipulated" by the Left-dominated Labour Party national executive, and should therefore reject the reforms. It is also designed to curb what they see as the naked ambitions of Mr. Tony Benn or Mr. Eric Heffer for the party leadership.

Mr. Duffy said yesterday that Mr. Benn "knows he depends on the Commie vote in the AUEW."

Our Political Staff adds: Mr. Norman Atkinson, party treasurer and a proponent of the Left's proposals on the Executive, called on shadow cabinet members to voice their opinion on who should control the party manifesto. Those opposed to Conference having the right to decide should now declare where they stood.

Mr. Callaghan has already said the entire shadow cabinet will support him in opposing the changes. But until the last few days only a few colleagues, like Mr. Bill Rodgers, have spelt out their opposition.

At the weekend, Mr. Roy Hattersley, a possible candidate for leader when Mr. Callaghan steps down, added his voice to those publicly condemning the proposals.

$260m jet cash raised in London

By Margaret Hughes

HALF THE $520m package to fund the purchase by Pan American Airways of 12 Lockheed Tristars with Rolls-Royce RB-211 engines has been completed.

The first stage of the financing, comprising two loans, has been raised in London. The rest will be raised in the U.S. The London loan consists of a $130m foreign currency export (buyer) credit and a $130m fixed rate U.S. dollar loan, has been raised in London. Loans were put up by the international banking consortium led by Hill Samuel and Sumitomo Banking as co-managers.

The Exports Credit Guarantee Department (ECGD) is providing full credit insurance cover and guaranteeing all the financing for the whole $520m contract. The U.S. funding will be raised through a private placement using an equipments trust arrangement.

The ECGD has had to provide far greater backing than for any other deal, and much more than was originally envisaged. For Rolls-Royce the financing has probably been costly, as interest rates and other factors have moved against it since it gave its commitment

Feature, Page 14

UK and Norway likely to opt for own gas-gathering lines

BY RAY DAFTER, ENERGY EDITOR

THE BRITISH and Norwegian Governments are expected to go ahead with separate gas collection pipeline schemes in the North Sea costing in total several billion pounds.

The two Governments have had repeated discussions on the possibility of sharing a gas gathering system, but it seems they now believe there is sufficient natural gas in each sector of the North Sea to justify the construction of separate systems.

However, they may decide that there should be a link between the two, providing oil companies and governments some flexibility of operations.

The idea is expected to be discussed further when Energy Ministers and officials — led by Mr. David Howell, the UK Energy Secretary and Mr. Bjartmar Gjerde, the Norwegian Oil Minister — hold another series of co-ordination meetings in mid-October.

Mr. Gjerde has said that recent gas finds in the Norwegian sector have boosted reserves to "many times the amount" needed to justify a separate line. It is thought that such a pipeline would run down the centre of the North Sea, close to the UK/Norwegian median line, into Germany. There is already one Norwegian gas line, linking the fields around Ekofisk with a terminal at Emden.

One of the recent Norwegian finds, which could well have tipped the balance in favour of a separate gathering system, is Shell's discovery on block 31/2. Although Shell is taking a cautious view of the find, pointing out that its first exploratory well has not yet been fully tested, Norwegian officials are hailing it as the biggest offshore gas field in the world.

EEC interest

Mr. Egil Bergsaker, an official of Norway's Oil Directorate, has said that the gas field discovered by Shell is believed to be bigger that the Anglo-Norwegian Frigg Field, which is now supplying much of Britain's natural gas needs.

On the UK side, British Gas Corporation and Mobil are conducting a feasibility study into a UK gathering system.

With Continental energy companies concerned about a possible shortage of natural gas in the 1980s, there has been a good deal of Common Market interest in new North Sea gathering systems.

One idea which has been discussed at Government level, for instance, includes the possible carriage of Norwegian gas through a UK pipeline. Some of this gas would then be transported through British Gas Corporation's distribution system to a point on the south coast, where it would be fed into a cross-Channel pipeline.

It is understood that French energy companies have been particularly interested in such a scheme.

Although it is thought the British Government hopes to be in a position to authorise the planning and construction of its own gathering network within the next 12 months—a timing that would enable the gas to flow well before the mid-1980s —is could be confronted with a problem. Some of the gas that would be tapped by a new pipeline is contained in reservoirs that have a high oil content. The gas and oil would have to be exploited at the same time.

But so far Mr. Howell has not yet taken a decision on how quickly future fields will be exploited. Energy Ministers and officials are grappling with the whole depletion issue and, in particular, how much companies will be encouraged to produce oil beyond Britain's own requirements.

Pandolfi set for top IMF position

By Jurek Martin in Washington

SIG. FILIPPO MARIO PANDOLFI, the Italian Treasury Minister, has emerged as the only serious candidate for the chairmanship of the International Monetary Fund's influential Interim committee, in succession to Mr. Denis Healey.

His accession will be made official when the committee meets in Belgrade on the eve of the annual meeting of the IMF and the World Bank, which starts on October 1.

The committee, comprising the world's leading Finance Ministers, is best described as the executive arm of the IMF, empowered to take the often political international decisions that the IMF bureaucracy, in its operational capacity, cannot make.

Although no rules exist about the chairmanship of the committee, which meets twice a year, it istraditional for the post to be held by a sitting Finance Minister. Mr. Healey, as Chancellor in the last British Labour Government, had held the position since 1977.

Mr. Healey was generally considered an extremely effective chairman of the Interim committee and his departure when Labour was ousted from power in May left something of a void in the international financial community.

Two principal candidates emerged to succeed him—Sig. Pandolfi and Herr Hannes Androsch, the Austrian Finance Minister. But Herr Androsch was known to have offended the West German Government in particular by his criticisms of the European Monetary System.

Sig. Pandolfi has, nonetheless, been considered a legitimate pretender in his own right. He is seen as one of the forces for stability in the turbulent seas of Italian economic policies in recent years

However, there was uncertainty about his ability to assume the chairmanship whe nhe tried to form a new Italian Government in the summer. That attempt failed, but, had it succeeded, it would have left the world's major economic powers without an obviously acceptable candidate for the committee chairmanship.

It is said that an Interim committe chairman needs not only to be an adept politician with perceived clout but also, at the very least, he needs to be an adequate economic technician. Sig. Pandolfi, architect of the three-year economic plan for Italy unvelled only last January—and which became an early casualty of the Italian political crisis—is reckoned to have the necessary twin qualifications.

Weather

UK TODAY

MAINLY DRY, some sunny intervals.

London, S.E. England, Channel Is.

Cloud at first, clearing and becoming mostly dry. Sunny intervals. Max. 16C (61F).

Central S.E., Central N., N.E. England, East Anglia, Midlands

Mist and fog patches, clearing. Mostly dry. Max. 16C (61F).

S.W., N.W. England, Lakes, Wales, Isle of Man

Mostly dry, sunny intervals. Max. 16C (61F).

Borders, Scotland, N. Ireland

Dry, bright at first. Clouding over, rain in places later. Max. 15C (59F).

Outlook: Mostly dry.

WORLDWIDE

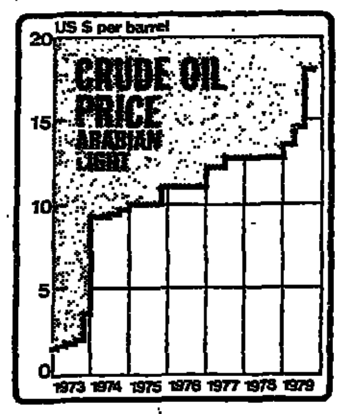
		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	C	17	63	Lisbon	S	20	68
Algiers	C	17	63	Locarno	C	16	61
Amsdm.	C	15	59	London	C	13	55
Athens	F	27	81	Madrid	F	15	57
Bahrain	S	35	95	Majorca	C	18	64
Barclna.	S	21	70	Malaga	S	22	72
Belfast	F	12	54	Malta	S	29	84
Belgrd.	R	23	73	M'chstr	F	14	57
Berlin	C	13	55	Melbne.	F	14	57
Biarritz	S	15	59	Milan	C	17	63
Bmghm.	R	11	52	Montreal.	S	14	56
Blackpl.	F	15	59	Moscow	C	20	68
Bordx.	C	15	59	Munich	R	8	46
Boulgn.	C	13	55	Nairobi	S	25	77
Bristol	R	12	54	Naples	C	22	72
Brussels	S	14	57	Nwcstl.	F	14	57
B. Aires	S	22	72	N. York	S	16	61
Cairo	S	30	86	Nice	C	22	72
Cardiff	C	13	55	Nicosia	S	27	81
Cas'b'ca	S	22	72	Oporto	S	19	66
Cape T.	S	18	64	Oslo	C	10	50
Chicago	S	22	72	Paris	S	15	59
Cologne	F	14	57	Perth	F	17	63
Cpnhgn.	S	14	57	Prague	R	8	46
Dublin	R	13	55	Reykvk.	C	7	45
Dbrvnk.	C	22	72	Rhodes	S	26	79
Edinbgh.	F	14	57	Rio J'o	C	24	75
Faro	S	21	70	Rome	F	23	73
Florence	R	19	66	Salzbrg.	R	11	52
Frankft.	C	12	54	Singapr.	S	29	84
Funchal	C	22	72	Stckhm.	F	13	55
Geneva	C	10	50	Strasbg.	C	10	50
Gibrltr.	S	22	72	Sydney	C	17	63
Glasgow	C	14	57	Tangier	S	21	70
G'rnsey	C	13	55	Tehran	S	24	75
Helsinki	S	11	52	Tel Aviv	S	26	79
H. Kong	C	25	77	Tenerife	C	17	63
Innsbrk.	C	11	52	Tokyo	C	31	88
Invrnss	C	12	54	Toronto	S	18	64
I. o Man	F	13	55	Tunis	R	21	70
Istanbul	S	24	75	Venice	F	19	66
Jersey	C	14	57	Vienna	R	13	55
Jo'burg	S	22	72	Warsaw	C	12	54
L. Plms.	C	24	75	Zurich	C	9	48

C—Cloudy. F—Fair. Fg—Fog. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow.

THE LEX COLUMN

Investment in oil for everyman

"You too can be an oil sheik!" The headlines which greeted the British National Oil Corporation's so far rather nebulous scheme to raise finance from the public served to emphasise the potential popular appeal of wider participation in energy resources.



The big jump in energy prices has been economically necessary if consumption is to be moderated and exploration and production stimulated. Yet it is easy enough for the man in the street to feel exploited as a result of this necessary process of adjustment. In the U.S., public opinion polls suggest that most American citizens believe the energy "crisis" is something invented by the oil companies in order to rake in huge profits. Meantime the oil majors are searching the accountancy handbooks for guidance on concepts like stock appreciation and current cost margins, and several have hastily changed their inventory accounting procedures over to the LIFO system which throws up lower profits when prices are rising.

Bridging the gap

All this might not be so embarrassing if the gulf between oil producers and the public could somehow be bridged. Just as widespread property ownership has given legitimacy to the house price spiral — which would scarcely have been so easily accepted if the landlord/tenant system had still predominated — so broad investment by private individuals in oil resources would create a necessary element of common interest. Yet this is a time of shrinking equity share registers (with the exception, by courtesy of the Government, of that of BP).

New political initiatives are being taken in several different countries, however. The recent flotation of British Columbia Resources Investment Corporation, in which shares were allotted to some 2m people, raised C$487.5m in new money and became Canada's largest-ever share issue.

In Alaska there have been moves to establish the Alaska General Stock Ownership Corporation in which each resident of the state would have one share. Now BNOC is formulating possible schemes to be launched next year as a way of instroducing wider investment interest in line with Government policy towards nationalised industries.

A far more radical scheme was put forward last year by two Financial Times writers, Samuel Brittan and Barry Riley. The concept was that equal shares in the rights to the North Sea royalty and tax revenues at present accruing to the Government would be handed over to UK citizens in the form of negotiable certificates which would be free. Such a scheme would spread wealth more fairly than through tax cuts, while Governments could not claim undeserved credit for the North Sea windfall which otherwise might encourage a swollen public sector.

Politicians do not, of course, readily give away something for nothing. They are far more likely to be attracted to new and more painless ways of raising money. Yet there is another important element—that of nationalism (or more accurately in the case of British Columbia, provincialism). Small territories do not like being dependent on foreigners to exploit their resources, and there can be a powerful political appeal in giving—government backing to a local operation which might not spring up on purely commercial grounds.

According to the B.C. premier, Mr. Bill Bennett, BCRIC represented a "once in lifetime opportunity for the greatest number of people to become owners and not tenants in our own land." The B.C. government handed over trading assets — including forest products companies and oil licences—in exchange for 15m shares. This allowed it to offer five free shares to all citizens of British Columbia.

Free for all

Not surprisingly, there was a big response for the free shares —around 87 per cent of the population applied for the five shares worth about C$6 each, making 10.4m free shares in all. Less predictably there were massive cash subscriptions for extra shares, of which 81.25m were sold between March and June this year.

This enormous capital injection opened up BCRIC's own investment horizons, but it also meant substantial dilution of its original interests. BCRIC became for the time being, a cash box rather than a resources operation. Still, the price held up well when the shares were listed last month in Vancouver.

Several special protective features were built into the BCRIC prospectus in order to maintain the desired shareholder profile. Ownership is restricted to Canadian citizens, and no individual may hold more than 1 per cent of the voting shares (though mutual or pension funds may hold up to 3 per cent).

Private investors

It looks as though BNOC in the UK will be pondering on similar restrictions as it prepares its scheme to draw in outside participation. The proposals may see the light of day somewhere around the middle of next year.

It is unlikely that there will be an issue of equity in BNOC itself. That would create too many conflicts. There are various possibilities for bringing in institutional finance, but BNOC appears to be attracted by the political possibilities of an investment tailored for the private investor. Both private an institutional sources could be tapped.

The small investor will probably be offered some form of revenue participation certificate —the model being LASMO's Oil Production Stock (on which, as it happens, the first income payment is due to be announced tomorrow). Whether it should, like the OPS, be linked to gross revenues or should be more strictly a profit-sharing security is a matter for debate at this stage.

In either event the aim will be widespread ownership in small amounts, which will no doubt mean restrictions on the size of individual holdings, and will require easy availability at the retail level. Post Office counters would be the ideal sales outlets.

Not that either the Government or BNOC has been guided entirely by the principle of cutting the small investor in on a good investment. For BNOC it has been only a small price to pay for staying more or less intact in a radically changed political environment. For the Government the scheme offers the potential of new revenue-raising opportunities should they be needed.

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V G H

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